DOCUMENT RESUME

ED 378 441 CE 068 166

AUTHOR	Falagrady, Teresa
TITLE	Vocabulary for Healthcare Personnel.
INSTITUTION	Denver Public Schools, Colo.
SPONS AGENCY	Office of Vocational and Adult Education (ED), Washington, DC. National Workplace Literacy Program.
PUB DATE	15 Jul 94
NOTE	148p.; For related modules, see CE 068 153-167. Some handouts may contain very small or broken type.
AVAILABLE FROM	Emily Griffith Opportunity School, 1250 Welton Street, Denver, CO 80204 ($27.60).
PUB TYPE	Guides - Classroom Use - Teaching Guides (For Teacher) (052)
EDRS PRICE	MF01/PC06 Plus Postage.
DESCRIPTORS	*Adult Literacy; Definitions; Health Services; *Hospital Personnel; Learning Activities; Learning Modules; *Literacy Education; *Medical Vocabulary; *Vocabulary Development; Workshops
IDENTIFIERS	*Workplace Literacy

ABSTRACT

Developed by educators from the Emily Griffith Opportunity School, this teacher's guide presents a course in health care vocabulary for secretaries, medical records personnel, laboratory assistants, shipping personnel, and patient relations personnel in health care facilities. The course, which should require 10-14 hours of instruction, contains lessons that cover the following topics: introduction--medical systems, word parts, Greek and Latin derivatives, prefixes and suffixes, common medical terms, and mnemonics. Half of the lessons are devoted to review and practice activities; pre- and post-tests and an evaluation section are also included. Lessons consists of a topic, objectives, instructor information, materials (multiple handouts), and activities with teacher notes. Contains 13 suggested medical resources. (KC)

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ED 378 441

VOCABULARY FOR HEALTHCARE PERSONNEL

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July 15, 1994

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VOCABULARY FOR HEALTHCARE PERSONNEL

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Teresa Falagrady, M.A.

July 15, 1994

INTRODUCTION TO THE WORKPLACE LITERACY PROJECT

This module was developed by educators from Emily Griffith Opportunity School as part of a National Workplace Education grant funded by the U.S. Department of Education. A cooperative effort between the business and education communities, the program was designed specifically to enhance employees' literacy skills.

Direct benefits to the workforce include improved morale and motivation, self-esteem, team work, and promotional opportunities.

We gratefully acknowledge the assistance of our partners. In addition we recognize all of the students who participated in classes and who provided us with invaluable feedback for strengthening future classes.

We hope partnerships such as these will provide the catalyst for developing new or continued on-site educational opportunities.

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FOREWORD

The vocabulary used in healthcare is a complicated one -- however, one that can be mastered by learning/reviewing word parts first, and practicing, second.

Vocabulary for Healthcare Personnel is intended for those employees whose jobs include secretaries/ administrative assistants, insurance and medical records personnel, lab assistants, stocking and shipping personnel, patient relations personnel, and diet aides among them. Degree-seeking employees, such as nurses, etc., who require more technical knowledge, may want to consider enrolling in a longer, more in-depth medical terminology course.

This curriculum was originally used to supplement a broader, more detailed medical terminology course; however, it is complete enough within itself and can easily be used as an introduction/refresher to vocabulary-word review. It is intended for 10-14 hours of instruction, and it focuses on learning through repetition. Three-to-five hours per week outside of class is recommended for review.

The areas covered are definitions, usage, spelling, pronunciation, and memory devices for remembering terms. There are many activities included, and they were specifically chosen to make learning more enjoyable and relevant to employees' jobs. These activities are crossword puzzles, fill in the blank, matching, multiple choice, hangman, true/false, compare/contrast, pictographs, and flashcards. It is

recommended that employees bring work-related samples of healthcare vocabulary to class to connect in-class learning with employees' jobs.

The curriculum will focus initially on learning basic word parts -- prefixes, suffixes, and root words -- the Latin and Greek derivatives that comprise a large part of the English language. Then, it will continue to build medical terms from these word parts. By breaking down the lengthy and multi-syllabic words first, followed by putting the parts together, learning and mastery become more manageable.

A list of medical resource materials, featuring dictionaries and workbooks that the employee can use for independent-study can be found at the end of this curriculum. It is recommended that employees use a reference manual in class as well as at home.

The format for each lesson contains the following key areas: TOPIC, OBJECTIVE, INSTRUCTOR INFORMATION, MATERIALS, AND ACTIVITY. Each area is explained below.

TOPIC:	main focus of the day's lesson
OBJECTIVES:	the outcome(s) expected of the employees at the end of the lesson
INSTRUCTOR INFO:	directions, (if any) for the instructor regarding the day's lesson; an "**I**" following the HANDOUT # refers to **instructor** handout only
MATERIALS:	the handouts that are needed for the day's lesson
ACTIVITY:	a hands-on activity/ies for employees to reinforce the day's lesson; can be done independently, in pairs, small groups, or with the entire group;

(NOTE: the format can be decided by the instructor or employees; small groups of three or four or pairs is often most effective)

Special thanks to the following resources for help in compiling this curriculum:

The Language of Medicine, 4th ed., Davi-Ellen Chabner, W.B. Saunders Co., 1991

Mary's Story: A Curriculum for Teaching Medical Terminology, Institute for the Study of Adult Literacy, Penn State University, 1991

Mosby's Medical, Nursing, and Allied Health Dictionary, 4th ed., 1994

Lesson 1 - Introduction

TOPIC: Introductions

OBJECTIVES: to allow employees to get to know one another -- professionally -- what their job responsibilities are, why they're taking the class, and personally -- what some of their characteristics are

INSTRUCTOR INFO: part of activity may be omitted if time constraint

MATERIALS: HANDOUT #1 (**Warm-up Activity**)

ACTIVITY: participants take turns introducing their partners; instructor introduces self, answers any questions, reviews class goals; distributes *Suggested Medical Resources* list (page 143) and reviews layout of curriculum

Lesson I

TOPIC: Pre-test

OBJECTIVES: to learn -- both from the employee's perspective and from the instructor's -- how much prior healthcare vocabulary knowledge employee has

INSTRUCTOR INFO: it is recommended that the test be taken individually

MATERIALS: HANDOUT #2 (**Pre-test**)

ACTIVITY: employees complete pre-test; discuss and check answers afterward; put an asterisk next to any incorrectly answered question; review as a whole group

HANDOUT #1

WARM-UP ACTIVITY

Interview the person next to you. Find out the following information:

1. Name

2. Where he or she works (site)

3. Department

4. Responsibilities

5. Reason for taking this class

Now, individually, answer <u>one</u> of the questions below:

1. My pet peeve is ...

2. My friends like me because ...

3. I wish I could stop ...

HANDOUT #2

PRE-TEST

12

HANDOUT #2, p. 2

Match the word on the left to its meaning on the right. Not all meanings will be used.

lingu/o	____	**A.** tooth
hepat/o	____	**B.** joint
cephal/o	____	**C.** skull
cost/o	____	**D.** kidney
denti/i	____	**E.** tongue
sclerosis	____	**F.** feeling/sensation
arthr/o	____	**G.** the head
crani/o	____	**H.** the rib
		I. liver
		J. hardening

HANDOUT #2, p. 3

Use the word parts in the box to match the meanings. Not all word parts will be used.

oma	tachy	pulmon/o	febr/o
psyche	cost/o	encephal/o	spondyl/o
plasty	toxic	myel/o	myl/o
dactyl/o	brady	plasty	hydr/o/a

_____	poison
_____	tumor
_____	the mind
_____	fast
_____	surgical reconstruction
_____	lung
_____	slow
_____	finger or toe

HANDOUT #2, p. 4

Write the word part in the blank that corresponds to each definition.

_____	new
_____	within
_____	bone
_____	inflammation
_____	below, too little
_____	many
_____	muscle
_____	false
_____	against
_____	without

HANDOUT #2, p. 5

Separate each word below into its parts and then write the meaning.

intracranial _____

_____

thermalgesia _____

_____

meningitis _____

_____

electrocardiogram _____

_____

rhinometer _____

_____

hypoesthesia _____

_____

mastectomy _____

_____

HANDOUT #2, p. 6

Use the two word parts to make a word that means:

an expert of the heart

_____ + _____ = _____

surgical removal of the uterus

_____ + _____ = _____

abnormally large fingers or toes

_____ + _____ = _____

an inflammation of the kidney

_____ + _____ = _____

paralysis of all four extremities

_____ + _____ = _____

water treatment

_____ + _____ = _____

HANDOUT #2, p. 7

Answer the following questions:

After her daily workout, Felicia took **antispasmatic** medicine for her legs. What was this for?

_____

_____

The man had **edema**. What does that mean?

_____

_____

Dr. Kay gave the patient **anesthesia** before surgery. What will that do?

_____

_____

The test showed that Sam had **hyper**thyroidism. Did his thyroid produce too much or too little?

_____

_____

HANDOUT #2, p. 8

Here are some word parts that show direction or location. Match the word on the left to its mate on the right. Some meanings might match more than one word part. Not all meanings will be used.

medial	_____	**A.** below
trans	_____	**B.** on the left side of the body
posterior	_____	**C.** beside
dorsal	_____	**D.** in the middle
inferior	_____	**E.** across or over
		F. back of the body

HANDOUT #2-I

PRE-TEST

(Answers)

20

HANDOUT #2-I, p. 2

Match the words on the left to its meaning on the right. Not all meanings will be used.

lingu/o	**E**	A. tooth
hepat/o	**I**	B. joint
cephal/o	**G**	C. skull
cost/o	**H**	D. kidney
denti/i	**A**	E. tongue
sclerosis	**J**	F. feeling/sensation
arthr/o	**B**	G. the head
crani/o	**C**	H. the rib
		I. liver
		J. hardening

HANDOUT #2-I, p. 3

Use the word parts in the box to match the meanings. Not all word parts will be used.

oma	tachy	pulmon/o	febr/o
psyche	cost/o	encephal/o	spondyl/o
plasty	toxic	myel/o	myl/o
dactyl/o	brady	plasty	hydr/o/a

toxic	poison
oma	tumor
psyche	the mind
tachy	fast
plasty	surgical reconstruction
pulmon/o	lung
brady	slow
dactyl/o	finger or toe

HANDOUT #2-I, p. 4

Write the word part in the blank that corresponds to each definition.

neo	new
intra	within
ostelo	bone
itis	inflammation
hypo	below, too little
poly	many
myo	muscle
psuedo	false
anti	against
an	without

HANDOUT #2-I, p. 5

Separate each word below into its parts and then write the meaning.

intracranial	**intra - within / cranial - skull = within the skull**
thermalgesia	**therm - heat / algesia - pain = pain caused by heat**
meningitis	**menin - membranes of brain / spinal cord itis - inflammation of = inflammation of the membranes that surround the brain or spinal cord**
electrocardiogram	**electro - electrical / cardi/o - heart / gram - recording = a recording of the electricity in the heart**
rhinometer	**rhin/o - nose / meter - instrument used to measure = instrument used to measure the nose**
hypoesthesia	**hypo - too little / esthesia - feeling/sensation = decreased sensitivity to pain**
mastectomy	**mast - breast / ect - surgical removal = surgical removal of the breast**

21

HANDOUT #2-I, p. 6

Use the two word parts to make a word that means:

an expert of the heart

ologist + cardi/o = cardiologist

surgical removal of the uterus

ect/o + hyster/o = hysterectomy

abnormally large fingers or toes

macro + dactyl/o = macrodactylia

an inflammation of the kidney

itis + nephr/o = nephritis

paralysis of all four extremities

plegia + quad = quadriplegia

water treatment

hydro + therapy = hydrotherapy

HANDOUT #2-I, p. 7

Answer the following questions:

After her daily workout, Felicia took antispasmatic medicine for her legs. What was this for?

to reduce/calm the tightening & contracting of her muscles

The man had edema. What does that mean?

retention of fluid/swelling

Dr. Kay gave the patient anesthesia before surgery. What will that do?

leave the patient without feeling

The test showed that Sam had hyperthyroidism. Did his thyroid produce too much or too little?

too much

HANDOUT #2-I, p. 8

Here are some word parts that show direction or location. Match the word on the left to its mate on the right. Some meanings might match more than one word part. Not all meanings will be used.

medial	**D**	A. below
trans	**F**	B. on the left side of the body
posterior	**E**	C. beside
dorsal	**E**	D. in the middle
inferior	**A**	E. across or over
		F. back of body

Lesson I

TOPIC: Medical Systems

OBJECTIVES: to review the major ten systems in the body

INSTRUCTOR INFO: handout is for brief review only; employees may review it more carefully at home. This curriculum does not cover the more technical areas of medical vocabulary

MATERIALS: HANDOUT #3 (**Body Systems**)

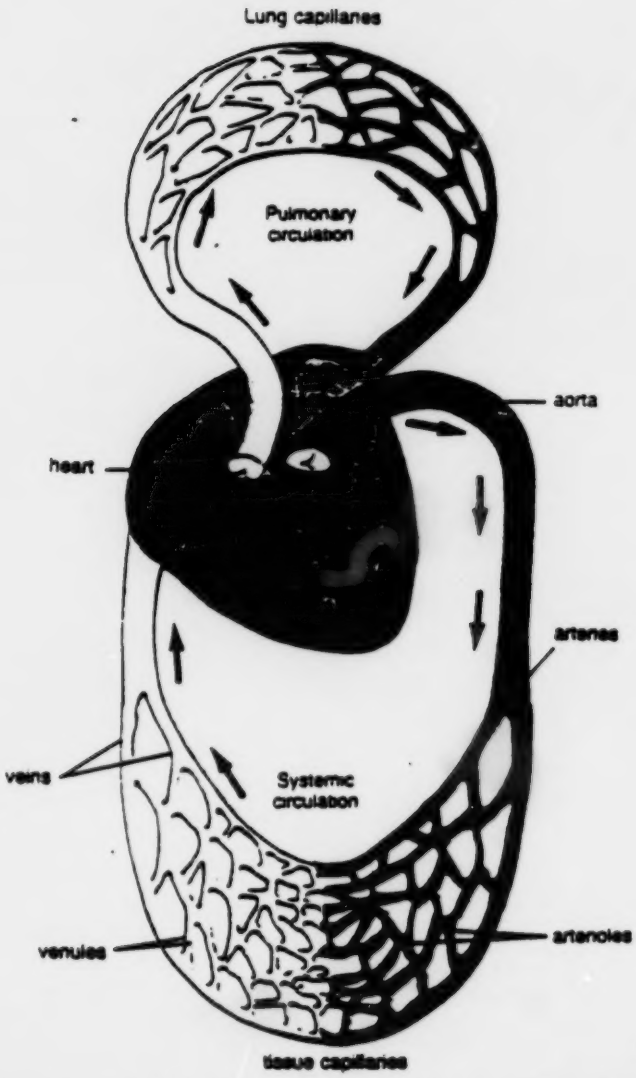
ACTIVITY: look at drawings of the ten systems and read accompanying text; find familiar words or word parts; quiz each other on the medical term for the common word

HANDOUT #3

BODY SYSTEMS

I. CIRCULATORY SYSTEM

Circulation of Blood



Colored vessels contain blood that is rich in oxygen. Arrows show the path of blood flow from the tissue capillaries through venules and veins toward the heart, to the lung capillaries, back to the heart, out the aorta to the arteries and arterioles, and then to the tissue capillaries.

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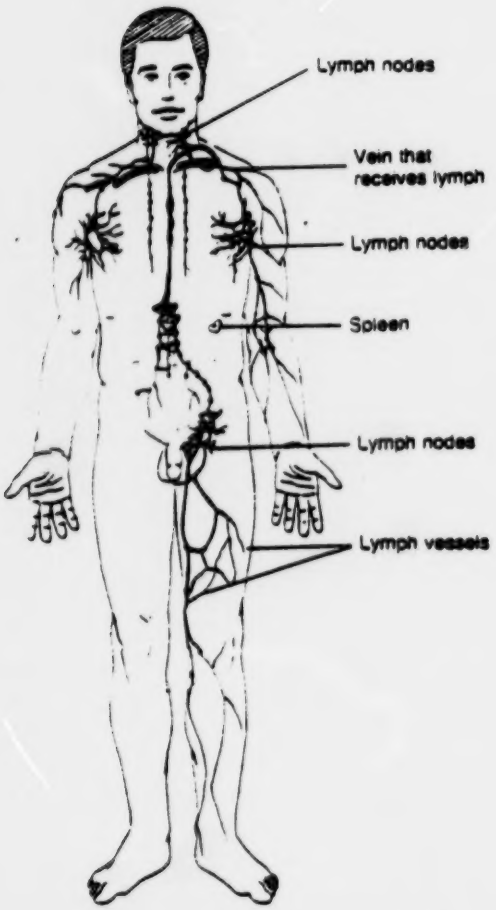
HANDOUT #3

I. CIRCULATORY SYSTEM *(Continued)*

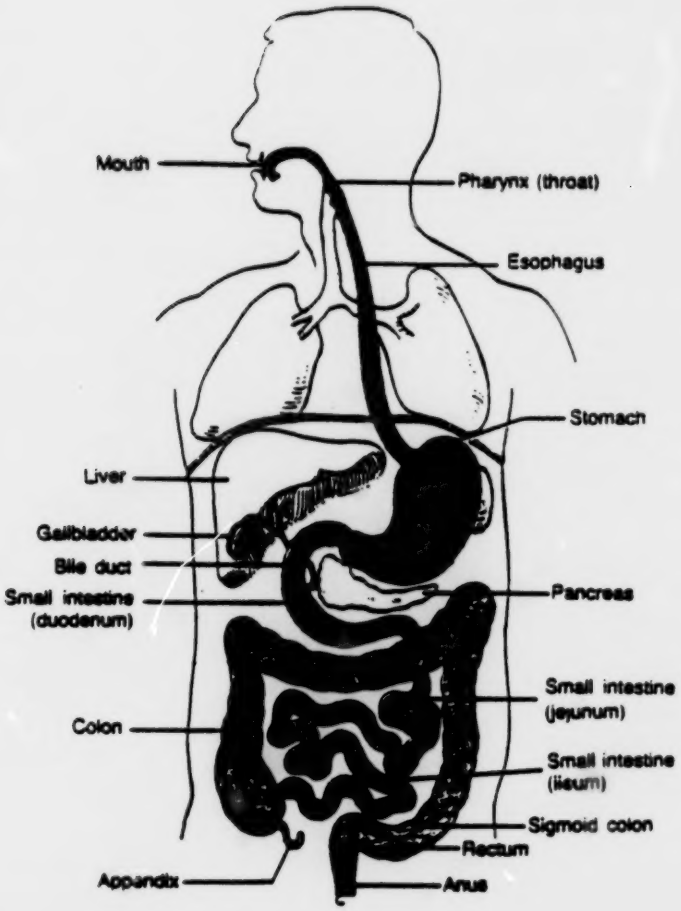
Circulation of Lymph



Lymph originates in the tissue spaces around cells, travels in lymph vessels and through lymph nodes to a large vein in the neck where it enters the bloodstream. Lymph contains white blood cells (lymphocytes) that help the body fight disease. The spleen produces lymphocytes and disposes of dying blood cells.

HANDOUT #3

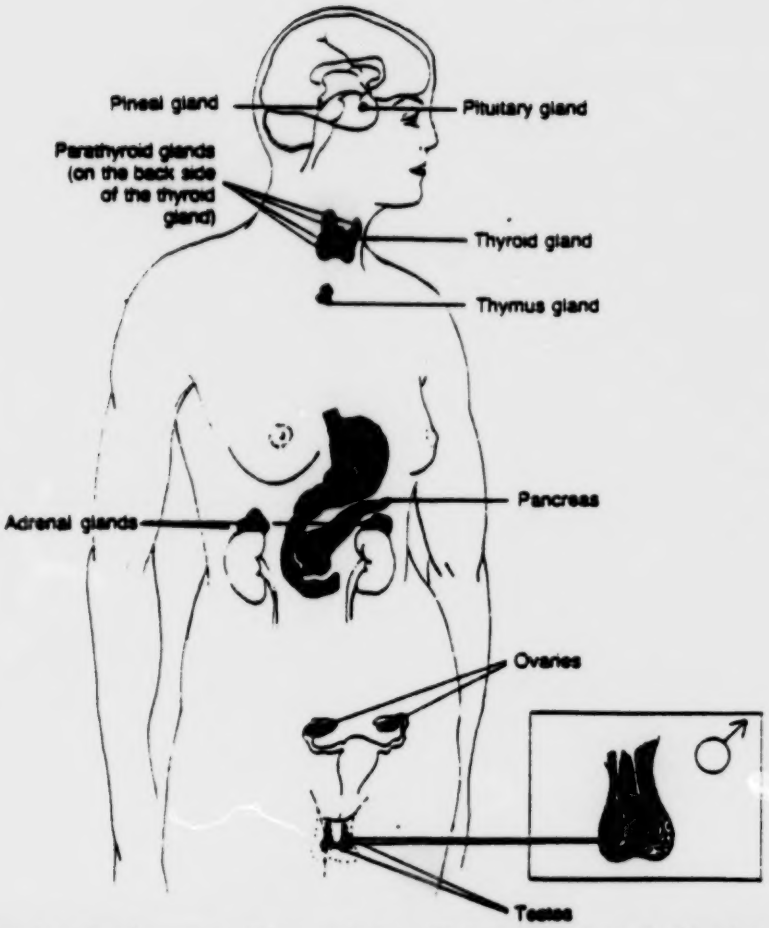
II. DIGESTIVE SYSTEM



Food enters the body via the mouth and travels through the pharynx, esophagus, and stomach to the small intestine. The liver, gallbladder, and pancreas make and store chemicals that aid in the digestion of foods. Digested (broken down) food is absorbed into the bloodstream through the walls of the small intestine. Any food that cannot be absorbed continues into the colon (large intestine) and leaves the body through the rectum and anus.

HANDOUT #3

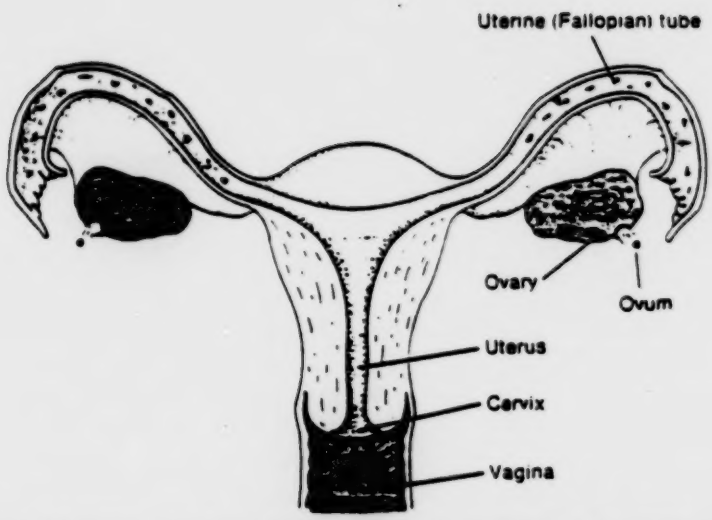
III. ENDOCRINE SYSTEM



Endocrine glands secrete (form and give off) hormones into the bloodstream. The hormones travel throughout the body and affect organs (including other endocrine glands) to control their actions.

HANDOUT #3

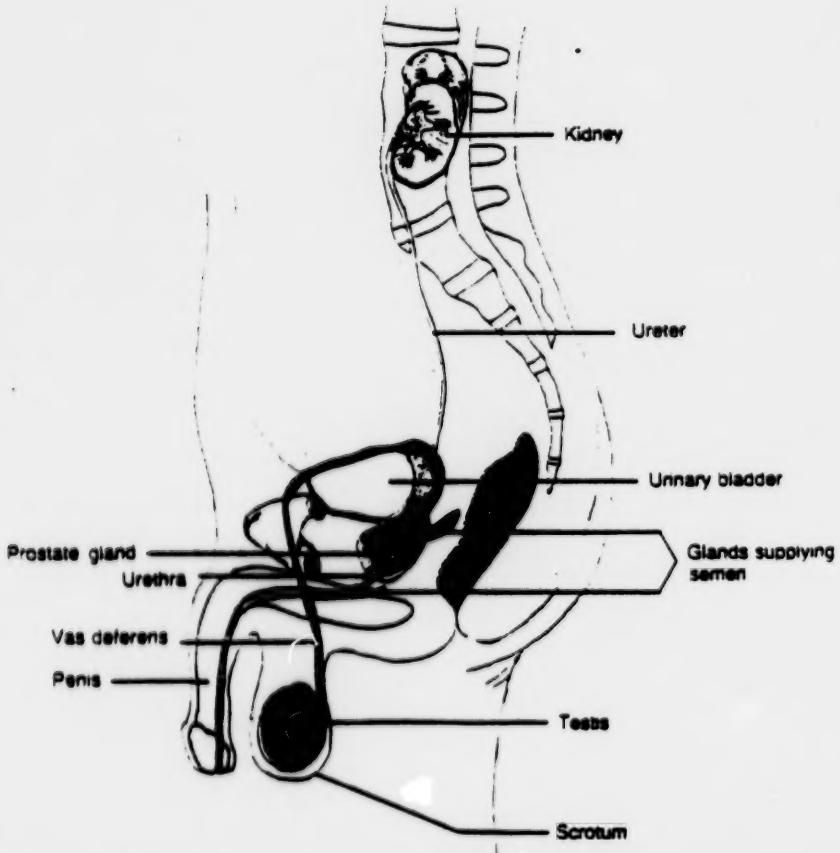
IV. FEMALE REPRODUCTIVE SYSTEM



An egg cell (ovum) is produced in the ovary and travels through the uterine (fallopian) tube. If a sperm cell is present and fertilization (the union of the egg and sperm cell) takes place, the resulting cell (embryo) may implant in the lining of the uterus. The embryo (later called the fetus) develops in the uterus for nine months and is delivered from the body through the cervix and vagina.

HANDOUT #3

V. MALE REPRODUCTIVE SYSTEM

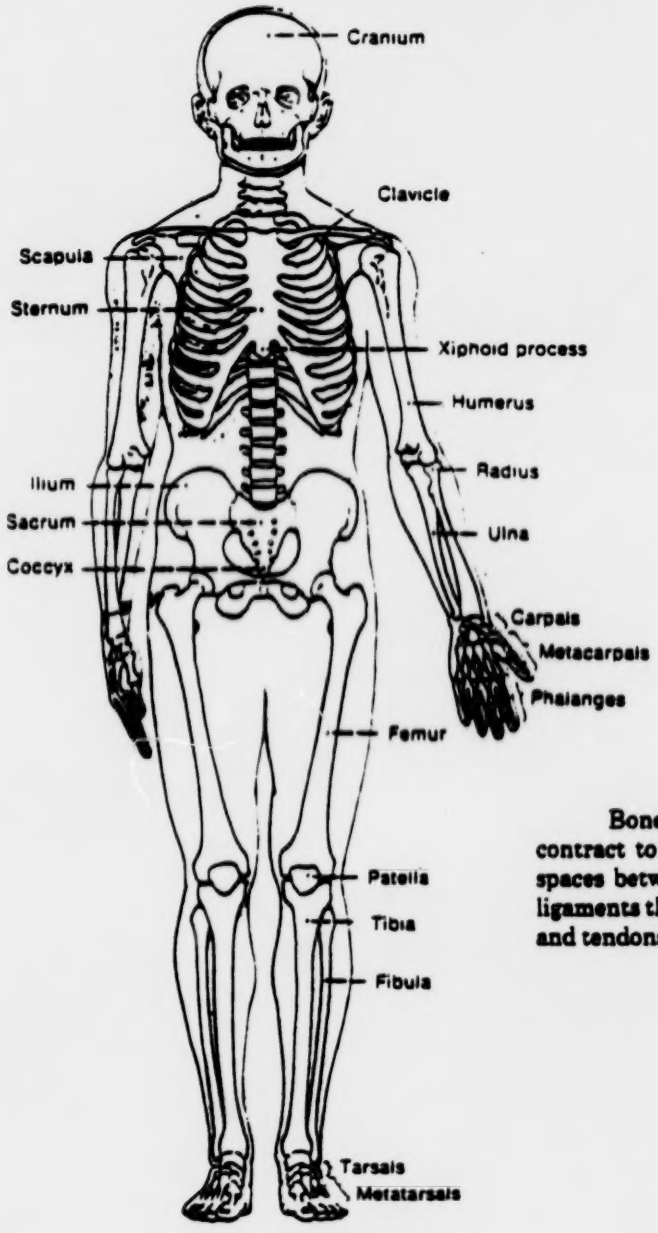


Sperm cells are produced in the testes (singular: testis) and travel up into the body, through the vas deferens, and around the urinary bladder. The vas deferens unites with the urethra, which opens to the outside of the body through the penis. The prostate and the other glands near the urethra produce a fluid (semen) that leaves the body with sperm cells.

HANDOUT #3

VI. MUSCULOSKELETAL SYSTEM

Bones: Anterior View

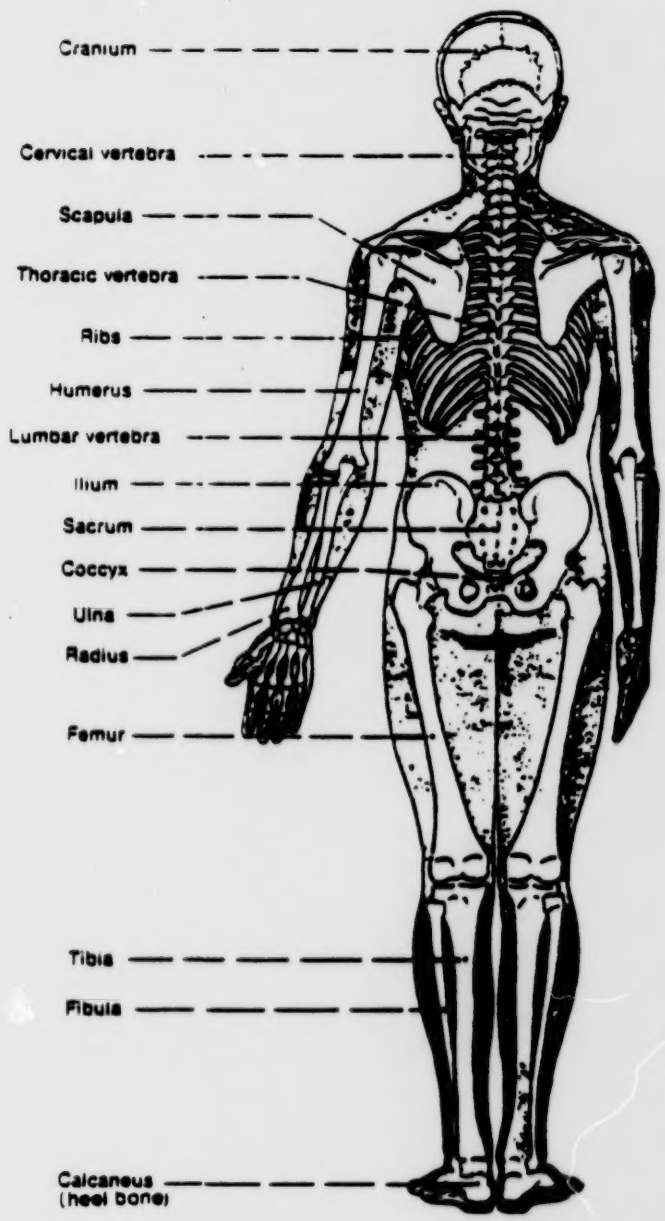


Bones are connected to muscles that contract to move the body. Joints are the spaces between bones. Near the joints are ligaments that connect bones to other bones and tendons that connect bones to muscles.

HANDOUT #3

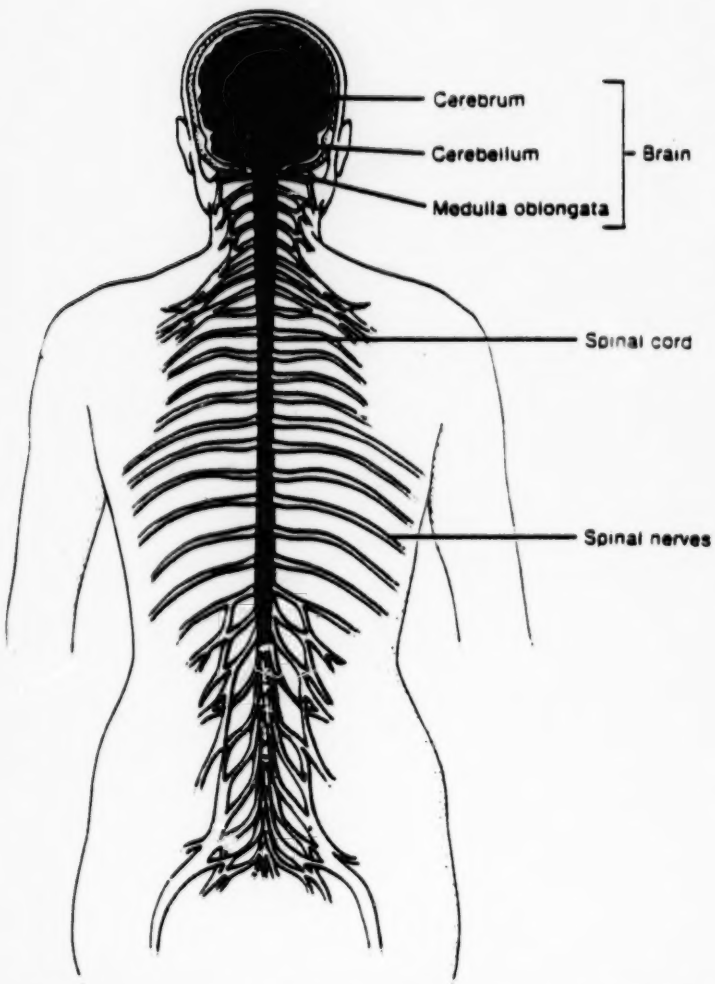
VI. MUSCULOSKELETAL SYSTEM *(Continued)*

Bones: Posterior View



HANDOUT #3

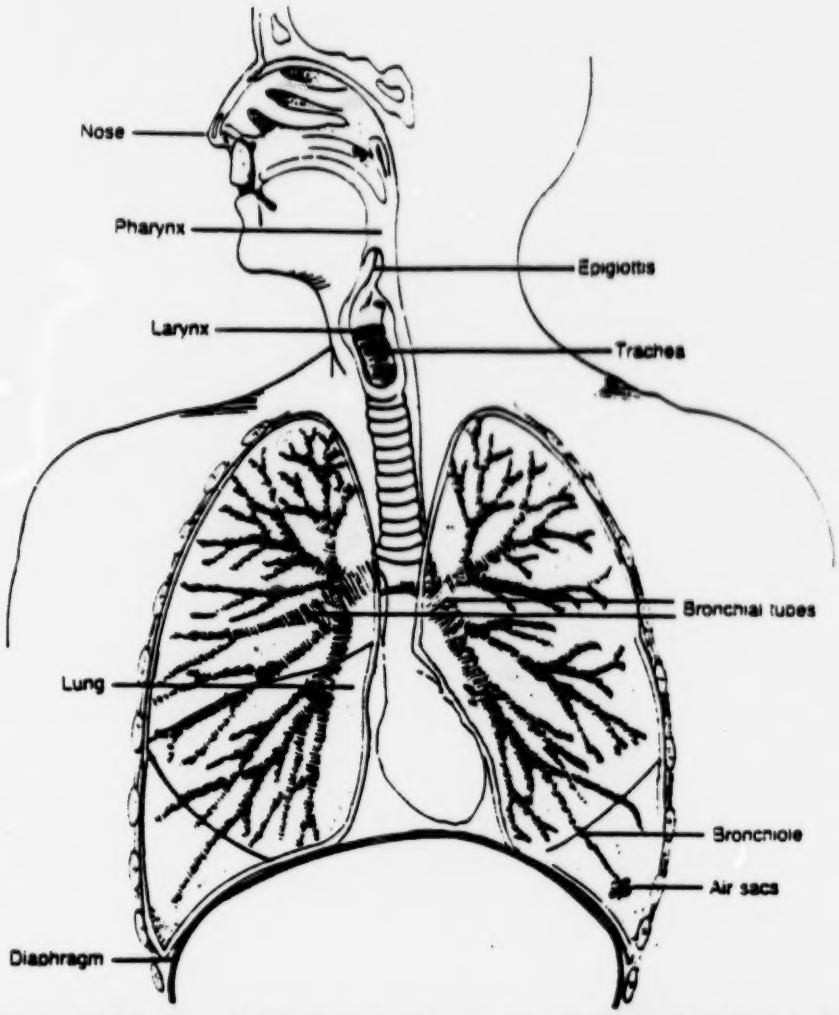
VII. NERVOUS SYSTEM



The central nervous system is the brain and the spinal cord. The peripheral nervous system includes the nerves that carry messages to and from the brain and spinal cord. Spinal nerves carry messages to and from the spinal cord, and the cranial nerves (not pictured) carry messages to and from the brain.

HANDOUT #3

VIII. RESPIRATORY SYSTEM

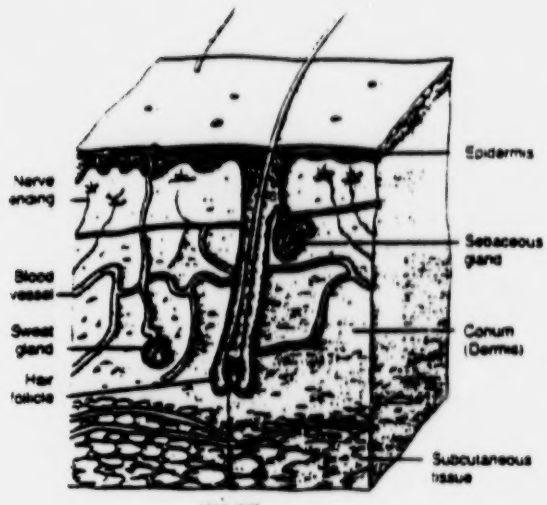


Air enters the nose and travels to the pharynx (throat). From the pharynx, air passes the epiglottis and larynx (voice box) into the trachea (windpipe). The trachea splits into two tubes, the bronchial tubes, that carry air into the lungs. The bronchial tubes divide into smaller tubes called bronchioles that end in small air sacs. The thin air sacs allow oxygen to pass through them into tiny capillaries containing red blood cells. The red blood cells transport the oxygen to all parts of the body.

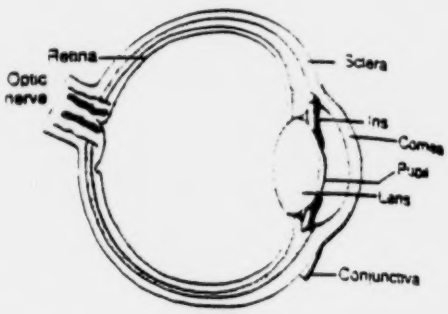
In a similar manner, gaseous waste (carbon dioxide) leaves the blood to enter air sacs and then travels out of the body through bronchioles, bronchial tubes, trachea, larynx, pharynx, and the nose.

HANDOUT #3

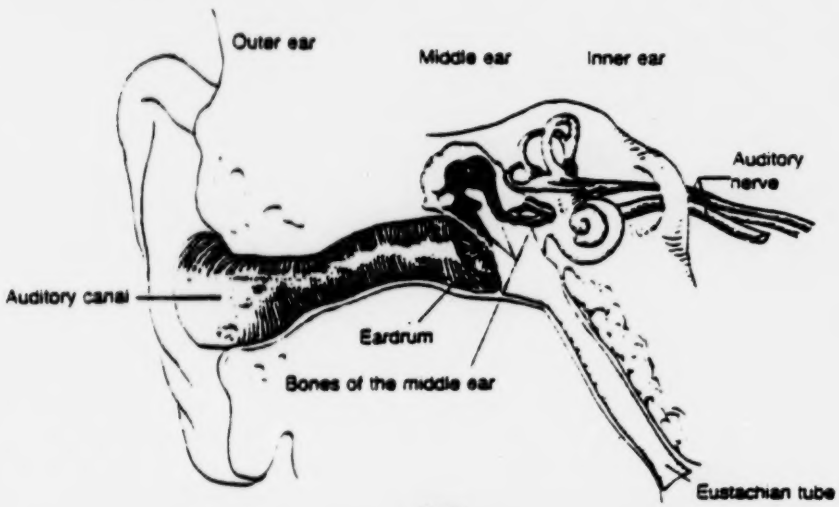
IX. SKIN AND SENSE ORGANS



SKIN



EYE

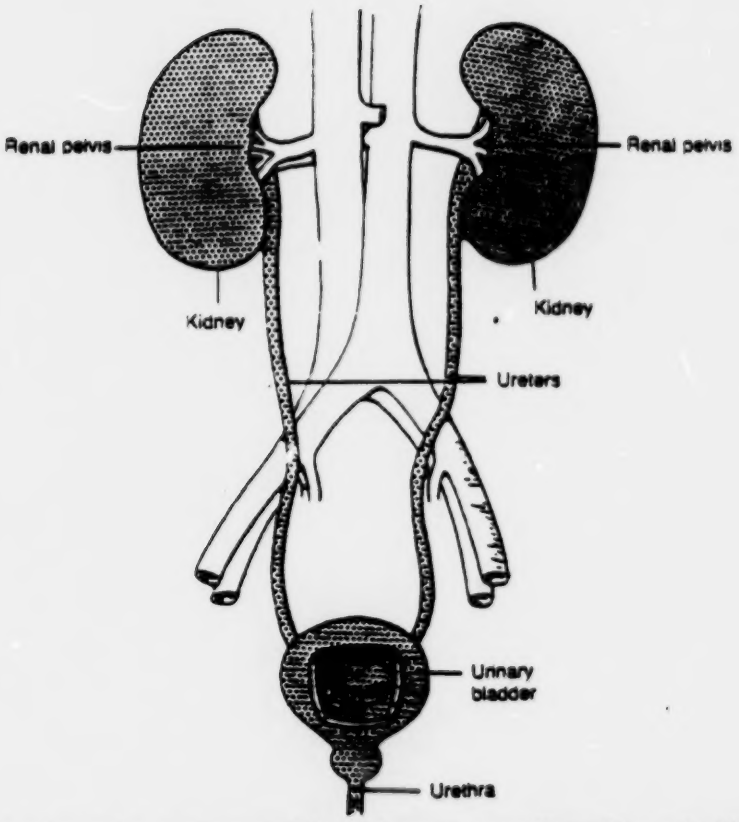


EAR

The skin and sense organs receive messages (touch sensations, light waves, sound waves) from the environment and send them to the brain via nerves. These messages are interpreted in the brain, making sight, hearing, and perception of the environment possible.

HANDOUT #3

X. URINARY SYSTEM



Urine is formed as waste materials, such as urea, are filtered from the blood into the tubules of the kidney. Urine passes from the tubules into the central collecting section of the kidney, the renal pelvis. Each renal pelvis leads directly to a ureter, which takes the urine to the urinary bladder. The bladder releases urine to the urethra and urine leaves the body.

Lesson 2

TOPIC: Word Parts

OBJECTIVES: to review/learn the basic components of words

INSTRUCTOR INFO: none

MATERIALS: HANDOUT #4 (**Prefixes, Suffixes, and Root Words**)

ACTIVITY: employees complete the exercise, compare answers, and discuss

HANDOUT #4

PREFIXES, SUFFIXES, AND ROOT WORDS

Prefixes are letters added to the beginnings of words. They have definite meanings and change the meanings of the words they are added to.

Example: **re** = again
regain means "gain again"

mis = wrong
mistake means "to take wrong"

Underline each correct meaning. Write a healthcare word and its meaning for as many prefixes as you can. The first one is done for you.

bi (one, <u>two</u>, three) **bilateral** on both sides

1. **super** (under, over, against)
2. **post** (now, before, after)
3. **an** (between, in, without)
4. **sub** (under, over, again)
5. **pre** (after, before, for)
6. **inter** (between, out, with)
7. **intra** (within, out, across)
8. **trans** (up, down, across)
9. **para** (two, in, side)
10. **uni** (one, two, many)

HANDOUT #4-I

PREFIXES, SUFFIXES, AND ROOT WORDS

Prefixes are letters added to the beginnings of words. They have definite meanings and change the meanings of the words they are added to.

Example: **re** = again
regain means gain again"

mis = wrong
mistake means "to take wrong"

Underline each correct meaning. Write a healthcare word and its meaning for as many prefixes as you can. The first one is done for you.

bi (one, <u>two</u>, three) **bilateral** on both sides

1. **super** (under, <u>over</u>, against) superior - toward the head
2. **post** (now, before, <u>after</u>) postop - the period after an operation
3. **an** (between, in, <u>without</u>) anhydrous - without water
4. **sub** (<u>under</u>, over, again) subdermal - under the skin
5. **pre** (after, <u>before</u>, for) preoperative care - care before an operation
6. **inter** (<u>between</u>, out, with) intervertebral - between the vertebrae
7. **intra** (<u>within</u>, out, across) intravenous - within a vein
8. **trans** (up, down, <u>across</u>) transfusion - blood passed from one individual to another
9. **para** (two, in, <u>side</u>) paralysis - loss of movement along one side
10. **uni** (<u>one</u>, two, many) unilateral - one side

TOPIC: Greek and Latin Derivatives

OBJECTIVES: to review/learn the word parts that derived from Greek and Latin

INSTRUCTOR INFO: choose several commonly-found word parts ahead of class time, distribute handout, ask employees to locate these common medical word parts and their meanings

MATERIALS: HANDOUT #5 (**Greek and Latin Verbal Derivatives**)

ACTIVITY: find instructor-chosen word parts and review meaning; write a medical term using that word part; choose a few different word parts -- quiz other employees about the meanings and ask to provide a medical term using that word part

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HANDOUT #5

Greek and Latin verbal derivatives

The verbs or combining forms of verbs listed in Appendix 5-5 are derived from either Greek or Latin. They may be attached to other roots to form words, or suffixes and prefixes may be added to them to form words. In the table the part or root of the word to which the verb is attached is italicized, and the meaning, if not clear, is given in parentheses.

Root or combining form	*Meaning*	*Examples*
-algia	Pain	*Cardi*algia (heart) *Gastr*algia (stomach) *Neur*algia (nerve)
audi-, audio-	Hear, hearing	*Audiometer* (hearing test device) *Audiology* (study of hearing)
bio-	Live	*Biology* (study of living things) *Biogenesis* (origin of life)
caus-, caut-	Burn	*Causalgia* (burning pain) *Cautery* (device to scar or burn)
-centesis	Puncture, perforate	*Thoracocentesis* (chest) *Pneumocentesis* (lung) *Arthrocentesis* (joint) *Enterocentesis* (intestine)
-clas-	Break	*Osteoclasis* (surgical fracture) *Claso*thrix (splitting of hair)
-duct-	Lead	*Abduct* (lead away from) Duct (tube leading to or from)
-dynia	Pain	*Mastodynia* (breast) *Pleurodynia* (chest) *Esophagodynia* (esophagus) *Coccygodynia* (coccyx)
-ectas-	Dilate	*Venectasia* (dilation of vein) *Phlebectasia* (dilation of veins)
-edem-	Swelling	*Cephalo*edema (swelling of head) *Edematous* (swollen)
-esthes-	Sensation	*Anesthesia* (without sensation) *Esthesiogenic* (producing sensation)
-fiss-	Split, cleft	*Fissure* (a cleft or groove) *Fissile* (capable of being split)
-flect-, -flex-	Bend	*Anteflect* (bend forward) *Flexion* (bending)
flu-, flux-	Flow	*Fluctuate* *Fluxion* *Afflux*
gen/o-	Producing	*Genesis* (origin or beginning) *Genophobia* (fear of sexuality)
-iatr/o-	Treatment	*Geriatrics* (treatment of aging) *Pediatrics* (treatment of children)
-kin/e-, -kin/o-, -kineto-	Movement, motion	*Kinetogenic* (producing movement) *Kinemometer* (motion measurer)
-ligs-	Bind	*Ligament* (suffix added to make noun) *Ligate* *Ligature*
-logy	Study	*Parasitology* (parasites) *Bacteriology* (bacteria) *Histology* (tissues)
ly/o-, lys/o	Dissolve	*Lysable* (readily soluble) *Lysogen* (producing dissolution)
-morph-, -morpho-	Form, structure, shape	*Amorphous* (no definite form) *Polymorphic* (many forms)
olfact-	Smell	*Olfactophobia* (fear) *Olfactory* (suffix added to make adjective)
-op/ia	Vision	*Hyperopia* (far sightedness) *Myopia* (nearsightedness)

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HANDOUT #5

Root or combining form	Meaning	Examples
-opia, -opt/o	Seeing	Opticokinetic (eye movements) Optometer (device for refraction)
-pipt-	Flutter	Palpitation
-par-, -partus-	Labor	Postpartum (after birth) Parturition (act of giving birth) Para i, ii, iii, iv, etc., are symbols for numbers of births
-pep-	Digest	Dyspepsia (bad, difficult) Peptic (suffix added to make adjective)
-pexy	Fix	Mastopexy (fixation of breast) Nephrosplenopexy (surgical fixation of kidney and spleen)
-phag-, -phago-	Eating	Phagophobia (fear of eating) Phagomania (food craving) Dysphagia (difficult eating or swallowing)
-phan/ero-	Visible, manifest	Phanerosis (becoming visible) Phantasm (unreal mental image)
-phas-	Speak	Aphasia (loss of speech functions) Dysphasia (difficulty in speaking)
-phil-	Affinity, love for	Philanthropy (love of mankind) Philoneism (love of change)
-phobia	Fear	Hydrophobia (fear of water) Photophobia (fear of light) Claustrophobia (fear of close places)
-phrag-	Fence off, wall off	Diaphragm (across—partition separating thorax from abdomen) Phragmoplast (enclosed spindle where midbody forms in mitosis)
-plas-	Form, grow	Neoplasm (new growth) Rhinoplasty (nose—operation for formation of nose) Otoplasty (common bile duct)
-plegia	Paralysis	Paraplegia (paralysis of lower trunk and legs) Hemiplegia (one-sided paralysis)
-pn-, -pneo-	Breathe	Dyspnea (difficult breathing) Apnea (lack of breathing) Hyperpnea (overbreathing)
-poiesis	Formation, production	Hemopoiesis (blood cell formation) Leukopoiesis (white blood cell production)
-ptosis	Fall	Proctoptosis (anus—prolapse of anus) Splanchnoptosis (viscera)
-rhagia	Burst forth, pour	Menorrhagia (abnormal bleeding during menstruation) Menometrorrhagia (abnormal uterine bleeding) Hemorrhage (blood)
-rhaphy	Suture	Herniorrhaphy (suturing or repair of hernia) Hepatorrhaphy (liver) Nephrorrhaphy (kidney)
-rhea	Flow, discharge	Leukorrhea (white discharge from vagina) Galactorrhea (milk discharge) Rhinorrhea (nasal discharge)
-rhexis	Rupture	Enterorrhexis (intestines) Metrorrhexis (uterus)
schist/o-, schiz/o-	Split, cleft, division	Schistocystis (bladder fissure) Schizonychia (splitting of nails)
-scope	Examine	Microscope Cardioscope Endoscope (within—an instrument for examining the interior of a hollow viscus)
spasm/o-	Spasm	Spasmogenic (causing spasm) Spasmolysis (relieving spasm)
-stasis	Standing still, stoppage	Hemostasis (stoppage of blood flow) Epistaxis (stoppage of a flow)
-staxis	Drop	
-teg-, -tect-	Cover	Tegmen Tectum (rooflike structure) Integument (skin covering)
-therap-	Treat, cure	Therapy Neurotherapy (nerves)

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HANDOUT #5

Greek and Latin verbal derivatives—cont'd

Root or combining form	*Meaning*	*Examples*
-therap—cont'd		*Chemotherapy* (chemicals) *Physiotherapy*
-tomy	Cut, incise	*Phlebotomy* (incision of vein) *Arthrotomy* (joint) *Appendectomy* (ectomy, meaning cut out—excision of appendix) *Oophorectomy* (excision of ovary)
-topo-	Place	*Topography* *Toponarcosis* (numbing—hence numbing of a part, or localized anesthesia)
-troph-, -tropho-	Nourishment, food	*Trophism* (nutrition) *Dystrophy* (defective nutrition)
-volv-	Turn	*Involution* *Volvulus* (twisting of an organ, as in intestinal obstruction with twisting of the bowel, or twisting of the esophagus)

HANDOUT #5

Greek and Latin adjectival derivatives

The roots and combining forms in Appendix 5-6 are derived from Greek or Latin adjectives. Adjectives will appear most often in compounds and will be joined to either nouns or verbs. Suffixes may be added to make them into nouns. In the table the part or root of the word the adjective modifies is italicized, and the meaning, if not given, is given in parentheses.

Root or combining form	*Meaning*	*Examples*
ankylo-	Bent or crooked	Ankylo*glossia* (tongue-tie) Ankylo*sis* (stiff or fixed joint)
auto-	Self	Auto*infection* Auto*lysis* Auto*psy* (disease) Auto*psy* (*view*—postmortem examination)
brachy-	Short	Brachy*gnathous* (receding underjaw)
brady-	Slow	Brady*cardia* (slow heartbeat) Brady*pepsia* (slow digestion)
brevi-	Short	Brevi*collis* (short neck) Brevi*flexor* (short flexor muscle)
cav-	Hollow	Cavity Cavernous *Vena* cava (vein)
cel-, coel-	Hollow, cavity	Celiac (of the abdominal cavity) Coelom (body cavity of embryo)
cryo-	Cold	Cryo*therapy* (treatment using cold) Cryo*anesthesia* (freezing body part)
crypto-	Hidden	Crypto*rchidism* (undescended testis) Crypto*mnesia* (subconscious memory)
dextro-	Right, right side	Dextro*manual* (right handed) Dextro*cardia* (heart on right side)
diplo-	Double, twice	Diplo*coria* (double pupil in eye) Diplo*pia* (double vision)
dolicho-	Long	Dolicho*collus* (long neck) Dolicho*cephalic* (long head)
dys-	Difficult, bad, disordered, painful	Dys*arthria* (speech) Dys*hidrosis* (sweat) Dys*kinesia* (motion) Dys*tocia* (birth) Dys*phasia* (speech) Dys*pepsia* (digestion)
eso-	Within, inward	Eso*phoria* (crossed eye) Eso*deviation* (a turning inward)
eu-	Well, good	Eu*phoria* (well-being) Eu*phagia, eupnea* (breath) Eu*thyroid* (normal thyroid) Eu*tocia* (normal birth)
eury-	Broad, wide	Eury*cephalic* (unusually broad head) Eury*somatic* (thickset body)
glyco-	Sugar, sweet	Glyc*emia* (glucose in the blood) Glyc*ogeusia* (sweet taste)
gravis	Heavy	Gravida (pregnant woman) Gravidism (pregnancy)
haplo-	Single, simple	Haploid (single chromosome set) Haplopathy (uncomplicated disease)
hetero-, heter-	Other, different	Heterocellular (of different cells) Heterohypnosis (induced by another)
homo-, homeo-	Same, alike	Homeomorphous (similar shape) Homozygous (having identical genes)
hydro-	Wet, water	Hydremia (excess water in blood) Hydrodipsia (absence of thirst)
iso-	Equal, alike	Isocellular (having similar cells) Isocoria (equal-sized pupils)

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HANDOUT #5

Greek and Latin adjectival derivatives—cont'd

Root or combining form	*Meaning*	*Examples*
latus, lat-	Broad	*Latitude* *Latissimus dorsi* (muscle adducting humerus)
leio-	Smooth	*Leiodermia* (smooth, glossy skin) *Leiotrichous* (smooth hair)
lepto-	Slender, small, thin	*Leptodermic* (thin skinned) *Leptodactylous* (slender fingered)
levo-	Left, to the left	*Levoduction* (eyes turn left) *Levorotation* (turning to the left)
longus, long-	Long	*Longitude* *Adductor* longus (muscle of thigh)
macro-	Large	*Macrocephaly* (having large brain) *Macrobiosis* (long life)
magno-	Large, great	*Magnitude* *Adductor magnus* (thigh muscle)
mal-	Ill, bad	*Malady* (illness) *Malaise* (general discomfort)
malac/o-	Soft, softening	*Malacia* (softening) *Malacotomy* (incision of soft parts)
medi-	Middle	*Median* *Medium* *Gluteus medius* (femur muscle)
mega-, megal/o-, megaly-	Large, oversized	*Megalgia* (severe pain) *Megalomania* (grandiose delusions) *Hepatomegaly* (enlarge liver)
meso-	Middle, mid	*Mesocarpal* (wrist) *Mesoderm* (skin) *Mesothelium* (a membrane lining of cavities)
micro-	Small	*Microglossia* (tongue) *Microblepharia* (eyelids) *Microorganism* *Microphonia* (voice)
minimus	Smallest	*Gluteus minimus* (smallest muscle of hip) *Adductor minimus* (muscle of thigh)
mio-	Less, decrease	*Miosis* (contraction of pupil) *Miopragia* (decreased activity)
multi-	Many, much	*Multipara* (to bear—woman who has borne more than one child *Multilobar* (lobes) *Multicentric* (centers)
necro-	Death	*Necropsy* (autopsy) *Necrophobia* (fear of death)
neo-	New	*Neoformation* *Neomorphism* (form) *Neonatal* (first 4 weeks of life) *Neopathy* (disease)
oligo-	Few, little	*Oligomenorrhea* (scanty menses) *Oligosymptomatic* (few symptoms)
opisth/o-	backward, behind, dorsal	*Opisthorhilia* (recession of lips) *Opisthopareia* (walking backward)
ortho-	Straight, normal, correct	*Orthodontics* (straightening teeth) *Orthograde* (walking erect)
oxy-	Sharp, quick	*Oxyesthesia* (overly acute senses) *Oxyrhine* (sharp-pointed nose)
pachy-	Thick	*Pachyderma* (abnormally thick skin) *Pachyonychia* (overly thick nails)
paleo-	Old, primitive	*Paleogenetic* (originated in past) *Paleologic* (primitive reasoning)
platy-	Flat, wide	*Platyglossal* (wide flat tongue) *Platycephaly* (flattened skull)
pleo-	More	*Pleonexia* (excessive greediness) *Pleonosteosis* (excess bone growth)

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HANDOUT #5

Root or combining form	*Meaning*	*Examples*
poikilo-	Irregular, varied	**Poikiloderma** (mottled skin) **Poikilothermic** (cold blooded)
poly-	Many, much	**Polyhedral** (many bases or faces) **Polymastia** (more than two breasts) **Polymelia** (supernumerary limbs) **Polymyalgia** (pain in many muscles)
pronus	Face down	**Prone** **Pronation**
pseudo-	False, spurious	**Pseudostratified** (layered) **Pseudocirrhosis** (suggestive of cirrhosis of liver) **Pseudohypertrophy**
sclero-	Hardness	**Sclerosis** (hardening) **Arteriosclerosis** (artery hardening)
scolio-	Twisted, crooked	**Scoliosis** (crooked spine) **Scoliokyphosis** (curvature of spine)
siniestro-	Left	**Siniesterular** (left eyed) **Siniestromanual** (left handed)
steno-	Narrow	**Stenosed** (narrowed, contracted) **Stenostomia** (narrow oral cavity)
stereo-	Solid, three dimensions	**Stereoscopic** (solid appearance) **Stereopsis** (three-dimensional vision)
supinus	Face up	**Supine** **Supination** **Supinator longus** (muscle in arm)
tachy-	Rapid, fast	**Tachyphagia** (bolting one's food) **Tachylogia** (rapid speech)
tele-, telo-	Distant, end	**Telalgia** (pain from another area) **Telencephalon** (end brain)
thermo-	Heat	**Thermogenic** (producing heat) **Thermolabile** (destruction by heat)
trachy-	Rough	**Trachyphonia** (voice) **Trachychromasic** (deeply staining)
xero-	Dry	**Xerocheilia** (dry lips) **Xerostomia** (dry mouth)

HANDOUT #5

Miscellaneous words and combining forms

Word or combining form	*Definition*
Body fluids	
aqua (pl. aquae)	Latin for water
chol-, chole-, cholo-	Bile
chyle	Latin for juice; a milky fluid consisting of lymph and emulsified fats that are taken up by the intestinal lymphatic glands from food and eventually mixed with the blood
dacryo-, lacrima	Tears
-emia	Greek (*haima*) for blood. (-emia often appears as a suffix, as in anemia, deficiency of blood)
galact-, galacta-, galacto-	Milk
hem-, hema-, hemo-, hemato-	Blood
hidro	Sweat
hydr-, hydro-	Water; also hydrogen
lac	Latin for milk
lacri-	Tears
lympho-	Lymph
mucus	Latin for the secretions (mucins) of the mucous membranes together with the inorganic salts, desquamated cells, and leukocytes. *Mucous* is an adjective; the mucous membrane is called *mucosa* (mu'ko'sah).
myxo-	Mucus (Greek, *myxa*)
plasma	Fluid portion of the blood in which corpuscles are suspended
pus	Latin for the liquid inflammatory product composed of leukocytes and a thin fluid
pyo-	Pus
ptyalo-	Clear, alkaline secretion from the salivary glands — submaxillary, sublingual, parotid, or other smaller mucous glands in the mouth
sangui-	Blood
serum	Latin for whey; the clear portion of animal liquid after separation from the more solid elements — especially blood serum
sialo-	Saliva or salivary gland
sudor	Latin for sweat or perspiration
ur-, uro-, urono-	Urine, urinary tract, or urination
Body substances	
adipo-	Fat
amylo-	Starch
cerumen	From *cera*, Latin for wax; a waxlike secretion found within the ear (earwax)
collagen	From the Greek word *kolla*; a derivative of colla and an albuminoid substance that acts as a main supportive protein of skin, tendon, bone, cartilage, and connective tissue
eleo-	Oil
ferrum	Latin for iron
glyco-	Sugar
halo-	Salt
heme	Iron; a constituent of hemoglobin (formerly called hematin)
hormone	A chemical substance produced in the body with a specific regulatory effect on certain cells or organs
hysi-, hyalo-	Glassy
lapis	Latin for stone
lipos, lipo-	Greek for fat
litho-	Stone or calculus
mel-, meli-	Sweet (from Greek and Latin words for honey)
natrium	Latin for sodium
oleo	Oil
petrous	Latin for resembling a rock
saccharo-	Sugar
sal	Latin for salt
sebum	Latin for suet; the secretion of the sebaceous glands
sperm	Semen, or testicular secretion
Colors	
albus	Latin for white
chloros, chloro-	Greek for green
cirrhus	From *kirrhus*, Greek for orange-yellow

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HANDOUT #5

Word or combining form	*Definition*
Chro—cont'd	
cyano-	Blue
erythro-	Red
leuco-, leuko-	White
lutein	Saffron yellow
melano-	Black
polio-	Gray, particularly referring to gray matter of the nervous system
porphyro-	Purple
rhodo-	Red
rubr	Latin for red
xantho-	Yellow
Numeral combining forms	
one	mono-, mon
two	dyo-, dy-
three	tri-
four	tetra-, tetr-
five	pent-, penta-
six	hex-, hexa-
seven	hept-, hepta-
eight	octo-, octa-, oct-
nine	ennea
ten	deka-, dek-
one hundred	hecto-, hecato-, hect-
one half	hemi-
one thousand	kilo-
first	proto-, prot-
second	deutero-, deuto-, deut-
third	trito-, trit-
one-hundredth	centi-
one-thousandth	milli-
twice, duplication	di-, dis-*

*'di, dis- in Latin means separation, like Greek dvs.

Source: *Mosby's Medical, Nursing & Allied Health Dictionary*, 4th Ed., 1994

TOPIC: More Review of Prefixes and Suffixes

OBJECTIVES: to learn the meaning of healthcare words through pictures

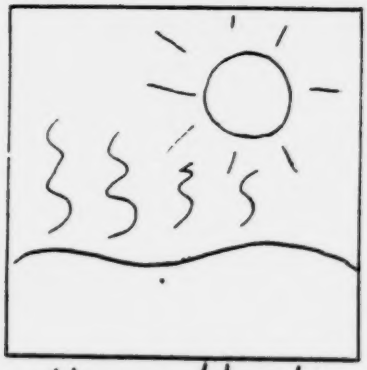
INSTRUCTOR INFO: may want employees to complete handout individually at first, then in groups

MATERIALS: HANDOUT #6 (**Medical Pictographs**)

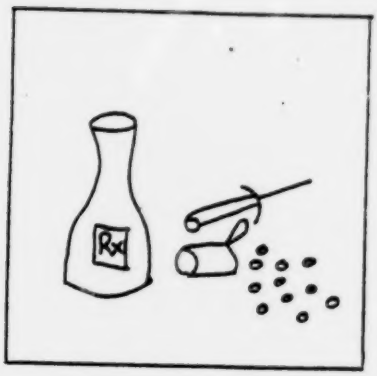
ACTIVITY: write both the Greek or Latin word and the commonly-known one; use the empty frame to create own, exchange papers and figure out each other's pictures

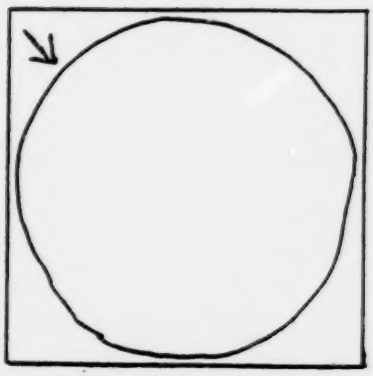
HANDOUT #6

MEDICAL PICTOGRAPHS



therm / heat





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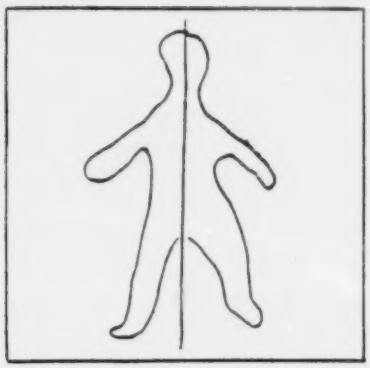
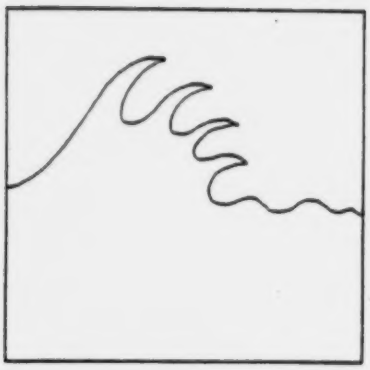
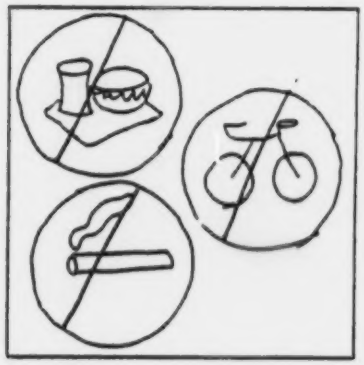
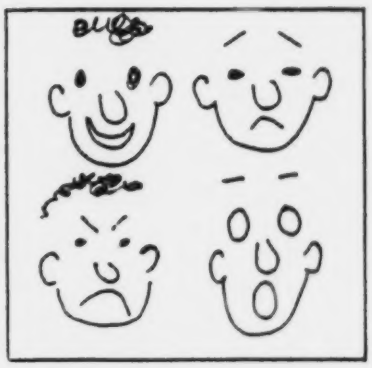
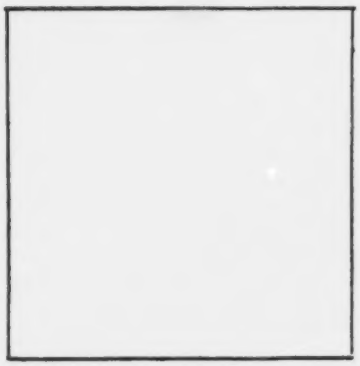
HANDOUT #6, p. 2



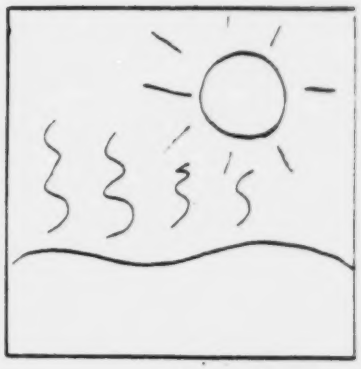






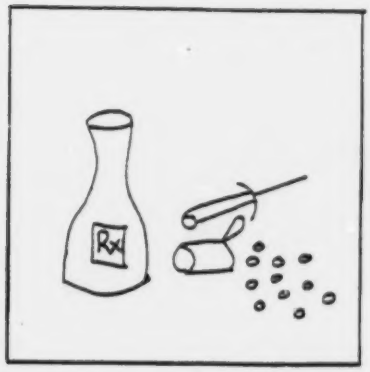


HANDOUT #6-1



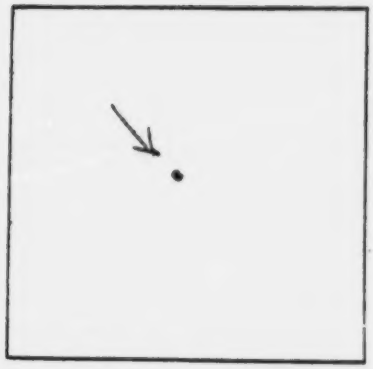
therm/heat

sono/sound

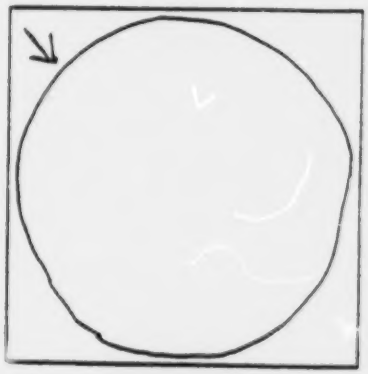


pharm/drugs

Febril/fever

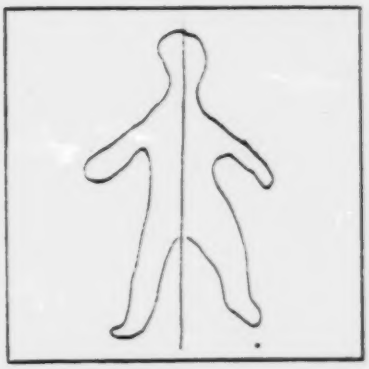


micro/small



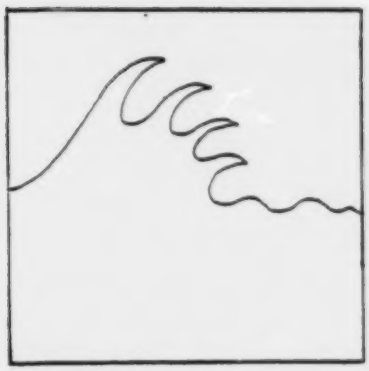
macro/large

HANDOUT #6-1, p. 2

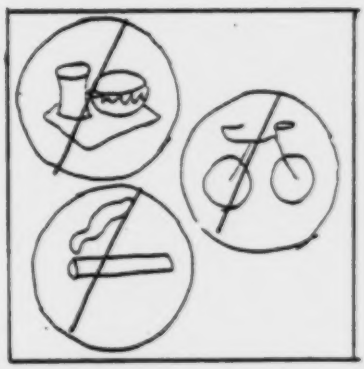


lateral/side

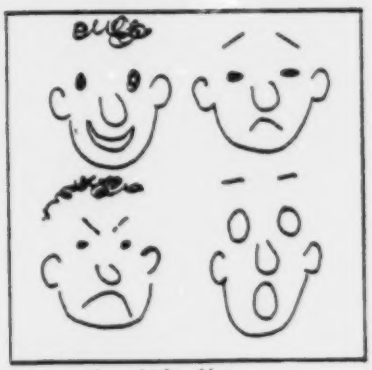
pseudo/false



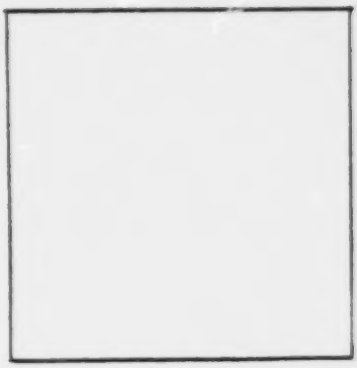
hydro/water



dis or anti/not, no, against



esthesi/feeling



TOPIC: Common Medical Terms (and their abbreviations)

OBJECTIVES: to become familiar with commonly-used words in healthcare -- their abbreviations and their meanings

INSTRUCTOR INFO: may want to split the list up to make it more manageable; can be used as an in-class activity and/or as a homework assignment

MATERIALS: HANDOUT #7 (**Common Medical Abbreviations**)

ACTIVITY: using medical resources (both books and people), write the meaning for these terms; discuss which ones are used most frequently in which departments of the hospital; draw pictures or diagrams to help clarify meaning; practice pronouncing terms, taking the words apart according to individual syllables.

HANDOUT #7

COMMON MEDICAL ABBREVIATIONS

ABBREVIATION	TERM	AREA/MEANING
AB	abortion	
ABN	abdominal	
ABNOR	abnormal	
AIDS	acquired immune deficiency syndrome	
AMI	acute myocardial infarction	
APPY	appendectomy	
ARDS	acute respiratory distress syndrome	
ASAP	as soon as possible	
AT FIB	atrial fibrillation	
BA	blood alcohol	
BIL	bilateral	
BKA	below knee amputation	
BP	blood pressure	
BPH	benign prostatic hypertrophy	
BS	blood sugar/ breath sounds	
BSO	bilateral salpingo oophorectomy	
BUN	blood urea nitrogen	
CA	carcinoma	

COMMON MEDICAL ABBREVIATIONS

ABBREVIATION	TERM	AREA/MEANING
CAB (G)	coronary artery bypass (graft)	
CAD	coronary artery disease	
CBC	complete blood count	
CC	chief complaint	
CHF	congestive heart failure	
CHI	closed head injury	
CHOLE	cholecystectomy	
CHR	chronic	
CNS	central nervous system	
CO_2	carbon dioxide	
COPD	chronic obstructive pulmonary disease	
C-SECT	cesarean section	
C & S	culture & sensitivity	
CTS	carpal tunnel syndrome	
CVA	cerebral vascular accident	
CVP	central venous pressure	
CXR	chest x-ray	
D & C	dilation & curettage	
DGEN	degenerative	
DIS	dislocation	

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HANDOUT #7, p. 3

COMMON MEDICAL ABBREVIATIONS

ABBREVIATION	TERM	AREA/MEANING
DKA	diabetic ketoacidosis	
DUB	dysfunctional uterine bleeding	
DVT	deep vein thrombosis	
DX	diagnosis	
EEG	electroencephalogram	
EKG	electrocardiogram	
EMG	electromyograph	
ENT	ears nose throat	
ETOH	alcohol	
FIB	fibula	
FUO	fever unknown origin	
FX	fracture/dislocation	
GB	gallbladder	
GSW	gunshot wound	
H & P	history & physical	
HBP	high blood pressure	
HYST	hysterectomy	
I & O	in and out	
INC	incomplete	
IV	intravenous	
IVP	intravenous pyelogram	

HANDOUT #7, p. 4

COMMON MEDICAL ABBREVIATIONS

ABBREVIATION	TERM	AREA/MEANING
JT	joint	
L	left	
LAP	laparotomy	
LAT	lateral	
LIG	ligament	
LLE	left lower extremity	
LLQ	left lower quadrant	
LNRI	lumbar nerve root irritation	
LS	lumbosacral	
MAX	maximum	
MI	myocardial infartion	
MIN	minimum	
MONO	infectious mononucleosis	
MS	multiple sclerosis	
NKA	no known allergies	
OB	obstetrics	
ORIF	open reduction internal fixation	
PARA	paraplegic	
PAT	paroxysmal atrial tachycardia	
PE	pulmonary edema	

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HANDOUT #7, p. 5

COMMON MEDICAL ABBREVIATIONS

ABBREVIATION	TERM	AREA/MEANING
POSS	possible	
POST OP	post operative	
PROB	probable	
PTA	prior to admission	
QUAD	quadriplegic	
R	right	
RBC	red blood count	
REM	rapid eye movement	
RESP	respiratory	
RO	rule out	
RX	treat, prescribe	
SCI	spinal cord injury	
SOB	shortness of breath	
SOM	serous otitis media	
SP	status post	
STAPH	staphylococcus aureus	
STAT	immediately	
STREP	streptococcus	
TAH	total abdominal hysterectomy	
TB	tuberculosis	

HANDOUT #7, p. 6

COMMON MEDICAL ABBREVIATIONS

ABBREVIATION	TERM	AREA/MEANING
TIA	transient ischemic attack	
TIB	tibia	
TLH	total left hip	
TMJ	temporomandibular joint	
TOS	thoracic outlet syndrome	
TURP	transurethral resection prostate/bladder	
UA	urinalysis	
UNK	unknown	
URI	upper respiratory infection	
UTI	urinary tract infection	
VD	venereal disease	
VENT	ventricle	
V FIB	ventricular fibrillation	
VS	vital signs	
WND	wound	
WNL	within normal limits	
WO	without	

Lesson 3

TOPIC: Short-term Review for Long-term Memory

OBJECTIVES: to begin to form a picture of medical words -- their spellings and abbreviations through review

INSTRUCTOR INFO: may want to make flashcards ahead of time -- especially of the harder-to-remember terms; terms should be written clearly, in large letters, and in lower case for ease of sight and remembrance; can use 5 x 8 cards, printer's scraps, etc. See next page for an example.

MATERIALS: HANDOUT #8-I (**Flashcards**)

ACTIVITY: as instructor flashes the abbreviation, write down the word it represents; reverse -- as the word is shown, write its abbreviation; create your own cards, bring to class and quiz co-workers

HANDOUT #8-I

FLASHCARDS (sample)

Front side	Back side
FIB	fibula
VS	vital signs
UTI	urinary tract infection

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TOPIC: Review: Practice One

OBJECTIVES: to continue to master the vocabulary used through mnemonics, true/false, pronunciation, word parts, meaning, reference areas

INSTRUCTOR INFO: ask employees to take turns pronouncing and dividing the words in Part III; repeat pronunciations in Part IV, "Reference Area" refers to the body part affected

MATERIALS: HANDOUT #9 (**Vocabulary for Healthcare Review (A)**)

ACTIVITY: complete the review, marking troublesome areas and/or questions that may have more than one answer, compare answers and correct; discuss

HANDOUT #9

Vocabulary For Healthcare Personnel (A)

Multiple Exercises

MEANINGS & MNEMONICS

Find the meaning for each term, then write a way for remembering it.

This root word refers to the head, _____

while this word means toward the tail _____

Postoperative means _____

Name two terms that mean the back side of the body or on the back

_____ _____

Name the two terms that mean on the belly side of a person

_____ _____

Describe a *superficial* wound. _____

What does *inferior* refer to (in medical terms)?

_____

What part of the following word refers to head?: *cephaloplegia*

What part of the following word refers to the side?: *posterolateral*

HANDOUT #9, p. 2

TRUE/FALSE

Place a **T** in the blank if the statement is true and an **F** if it's false. Correct the false statements.

_____ *subdorsal* refers to the top of the back

_____ a false sensation or feeling is called *psudesthesia*

_____ *intracranial* means between the skull

_____ a feeling or sensation in the spinal cord is referred to as *myeloencephalic*

_____ *gastralgia* means a pain in the stomach

_____ *anhydrous* means lacking air

_____ *thermesthesia* is the ability to recognize heat and cold

_____ *dorsoventral* means having to do with the back and front of the body

_____ *microcephaly* refers to an unusually large head

_____ *hemianalgesia* refers to a lack of feeling throughout the entire body

HANDOUT #9, p. 3

SUPERCALIFRAGILISTICEXPIALADOCIOUS & PRONUNCIATION

Divide each of the following words into their individual sounds (not word parts) and circle the syllable with the primary stress. Be able to pronounce each sound and then the entire word.

Example: **asthemometer**: as then (o) me ter

anesthesiologist

cephalomeningitis

electroencephalogram

encephalomyeloneuropathy

hyperthermalgesia

ophthalmalgia

polyneuralgia

thermesthesiometer

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HANDOUT #9, p. 4

WORDS AND THEIR PARTS

Divide the same words used in the previous page into their individual parts (prefix/root/suffix). Define each part. Then, starting at the back of the word first and then moving to the beginning of the term and across, put all of the parts together and define the entire word.

Example: astnen/o: feeling meter: instrument
an instrument for measuring feeling

HANDOUT #9, p. 5

"ITIS"ES AND "ALGIA"S

Provide the meaning for the following words that contain suffixes *itis* -- inflammation of and *algia* -- pain

MENINGitis _____

ENCEPHALitis _____

ENCEPHALOMYELitis _____

POSTENCEPHALitis _____

NEUROMYELitis _____

MYELitis _____

APPENDalgia _____

DERMalgia _____

DORSalgia _____

ABDOMINalgia _____

NEURalgia _____

HANDOUT #9, p. 6

PIN THE TERM ON THE BODY PART

For each of the terms, write the abbreviation followed by the area to which the term refers. Some terms may be used more than once.

TERM	ABBREVIATION	REFERENCE AREA
Example:		
left upper lobe	LUL	lung
myocardial infarction		
multiple sclerosis		
infectious mononucleosis		
laparotomy		
lumbosacral		
lumbar nerve root irritation		
left lower quadrant		
left lower lobe		
left upper extremity		
high altitude pulmonary edema		

HANDOUT #9-I

Vocabulary For Healthcare Personnel (A)

Multiple Exercises

MEANINGS & MNEMONICS

Find the meaning for each term, then write a way for remembering it.

This root word refers to the head, **cephal/o**

while this word means toward the tail **caudal**

Postoperative means **after operation**

Name two terms that mean the back side of the body or on the back
posterier **dorsal**

Name the two terms that mean on the belly side of a person
anterior **ventral**

Describe a *superficial* wound. **not deep**

What does *inferior* refer to (in medical terms)? **below/away from head**

What part of the following word refers to head?: ***ceph****aloplegia*

What part of the following word refers to the side?: *poster****olateral***

HANDOUT #9-I, p. 2

TRUE/FALSE

Place a **T** in the blank if the statement is true and an **F** if it's false. Correct the false statements.

F *subdorsal* refers to the top of the back **bottom/below the back**

T a false sensation or feeling is called *psudesthesia*

F *intracranial* means between the skull **within the skull**

F a feeling or sensation in the spinal cord is referred to as *myeloencephalic* **having to do with the spinal cord & brain/head**

T *gastralgia* means a pain in the stomach

F *anhydrous* means lacking air **lacking water**

T *thermesthesia* is the ability to recognize heat and cold

T *dorsoventral* means having to do with the back and front of the body

F *microcephaly* refers to an unusually large head **usually small head**

F *hemianalgesia* refers to a lack of feeling throughout the entire body **on one side of body**

HANDOUT #9-I, p. 3

SUPERCALIFRAGILISTICEXPIALADOCIOUS & PRONUNCIATION

Divide each of the following words into their individual sounds (not word parts) and circle the syllable with the primary stress. Be able to pronounce each sound and then the entire word.

Example: **asthemometer**: as then o me ter

anesthesiologist **an es the si ol o gist**

cephalomeningitis **ceph al o men in gi tis**

electroencephalogram **e lec tro en ceph al o gram**

encephalomyeloneuropaty **en ceph al o my el o neur o path y**

hyperthermalgesia **hy per ther mal ge si a**

ophthalmalgia **oph thal mal gi a**

polyneuralgia **po ly neur al gi a**

thermesthesiometer **ther mes the si o me ter**

HANDOUT #9-I, p. 4

WORDS AND THEIR PARTS

Divide the same words used in part iii into their individual parts (prefix/root/suffix). Define each part. Then, starting at the back of the word first and then moving to the beginning of the term and across, put all of the parts together and define the entire word.

Example: asthen/o: feeling meter: instrument
an instrument for measuring feeling

an = without, esthesi/o = feeling, ist = specialist
one who specializes in the loss of sensation

cephal/o = head, mening = membranes, itis = inflammation
inflammation of the membranes surrounding the head

electro = electricity, encephalo = brain, gram = record
record of the electronic activity of the brain

encephalo = main, myelo = spinal cord, meuro = nerves, pathy = disease
a disease involving the brain, spinal cord & nerve system

hyper = too much, therm = heat, algesia = pain
high sensitivity to heat

ophthalm = eye, algia = pain
pain in the eye

poly = many, neur = nerve, algia = pain
pain in many nerves

therm = heat, esthesio = feeling, meter = instrument
an instrument that measures heat & cold

HANDOUT #9-I, p. 5

"ITIS"ES AND "ALGIA"S

Provide the meaning for the following words that contain suffixes *itis* -- inflammation of and *algia* -- pain

MEMINGitis **membranes surrounding spinal cord**

ENCEPHALitis **head/brain**

ENCEPHALOMYELitis **head/brain/spinal cord**

POSTENCEPHALitis **after/head**

NEUROMYELitis **nerve/spinal cord**

MYELitis **spinal cord**

APPENDalgia **appendix**

DERMalgia **skin**

DORSalgia **back**

ABDOMINalgia **abdomen/stomach**

NEURalgia **nerves**

HANDOUT #9-I, p. 6

PIN THE TERM ON THE BODY PART

For each of the terms, write the abbreviation followed by the area to which the term refers. Some terms may be used more than once.

TERM	ABBREVIATION	REFERENCE AREA
Example:		
left upper lobe	**LUL**	**lung**
myocardial infarction	**MI**	**heart**
mulitple sclerosis	**MS**	**arteries**
infectious monomucleosis	**MONO**	**lungs**
laparotomy	**LAP**	**abdomen**
lumbosacral	**LS**	**spine**
lumbar nerve root irritation	**LNRI**	**between ribs & hips**
left lower quadrant	**LLQ**	**abdomen**
left lower lobe	**LLL**	**lung**
left upper extremity	**LUE**	**arms**
high altitude pulmonary edema	**HAPE**	**lung**

Lesson 4

TOPIC: Review: Practice Two

OBJECTIVES: to begin to master the terms on the Abbreviations list

INSTRUCTOR INFO: may want to omit different sections than the sections omitted here

MATERIALS: HANDOUT #10 (**Table Medical Terms (B)**)

ACTIVITY: fill in different sections of the table (for the **Meaning** section, be as specific as possible); compare and discuss; give examples of some of the terms; use the blank sections to create own meanings/terms/abbreviations

HANDOUT #10

Vocabulary for Healthcare Personnel (B)

Table (Medical) Terms

Directions: Complete the table. (The first one is done for you.)

MEANING	TERM	ABBREVIATION
one of the four parts of the abdominopelvic area	**Right Upper Quadrant**	**RUQ**
		POSS
to eliminate or dismiss		
inflammation in the pelvic region; salpingitis		PID
		R
damage to the column of nervous tissue extending from the brain to the lower lumbar vertebra		SCI
before allowing a person to enter		PTA
	shortness of breath	
refers to a previous disease condition		STAT POST
apparently or presumably	probable	
process of breathing	respiratory/ation	
opposite of the left upper arm or finger		RLE
	quadriplegic	
a symbol for medical prescription		
	rupture	
a bacterium that grows in small clusters like grapes that causes abscesses of the skin or other organs	straphylococcus aureus	

HANDOUT #10, p. 2

MEANING	TERM	ABBREVIATION
	right lower lobe	RLL
		POST OP
a period of sleep time during which dreaming occurs		
a sudden and unexpected death of an infant or young child for no apparent reason		
symptoms of depression, breast tenderness, and irritability that may occur prior to menstruation		
		SOM
opposite of the right, lower finger or toe	left lower extremity	
opposite direction of the left, lower side of the lung		RUL
cells made in the bone marrow that are necessary to carry oxygen from the lungs through the blood to all body cells		
opposite of the left, lower arm or finger		RUE
an unhealthy condition due to the loss of the mucous membrane of the stomach, duodenum, or any other part of the GI system exposed to gastric juices containing acid and pepsin		PUD

HANDOUT #10-I

Vocabulary for Healthcare Personnel (B)

Table (Medical) Terms

Directions: Complete the table. (The first one is done for you.)

MEANING	TERM	ABBREVIATION
one of the four parts of the abdominopelvic area	**Right Upper Quadrant**	**RUQ**
being within the limits of ability, capacity, or realization	possible	POSS
to eliminate or dismiss	rule out	RO
inflammation in the pelvic region; salpingitis	pelvic inflammatory disease	PID
opposite of left	right	R
damage to the column of nervous tissue extending from the brain to the lower lumbar vertebra	spinal cord injury	SCI
before allowing a person to enter	prior to admission	PTA
a brief period of time when a person is unable to take in oxygen	shortness of breath	SOB
refers to a previous disease condition	status post	STAT POST
apparently or presumably	probable	PROB
process of breathing	respiratory/ation	RESP
opposite of the left upper arm or finger	right lower extremity	RLE
a person with paralysis on four sides of his/her body	quadriplegic	QUAD
a symbol for medical prescription	treat, prescribe	RX
to break or tear apart	rupture	RUPT

HANDOUT #10-I, p. 2

MEANING	TERM	ABBREVIATION
a bacterium that grows in small clusters like grapes that causes abscesses of the skin or other organs	strphylococcus aureus	STAPH
opposite direction of the left, upper side of the lung	right lower lobe	RLL
after surgery	post operation	POST OP
a period of sleep time during which dreaming occurs	rapid eye movement	REM
a sudden and unexpected death of an infant or young child for no apparent reason	sudden infant death syndrome	SIDS
symptoms of depression, breast tenderness, and irritability that may occur prior to menstruation	premenstrual syndrome	PMS
inflammation of the middle ear caused by thin, watery fluid	serous otitis media	SOM
opposite of the right, lower finger or toe	left lower extremity	LUE
opposite direction of the left, lower side of the lung	right upper lobe	RUL
cells made in the bone marrow that are necessary to carry oxygen from the lungs through the blood to all body cells	red blood cell	RBC
opposite of the left, lower arm or finger	right upper extremity	RUE
an unhealthy condition due to the loss of the mucous membrane of the stomach, duodenum, or any other part of the GI system exposed to gastric juices containing acid and pepsin	peptic ulcer disease	PUD

TOPIC: Mnemonics (memory devices)

OBJECTIVES: how to remember medical vocabulary

INSTRUCTOR INFO: after employees have written and/or drawn ideas; collect; type, copy, and distribute handout to all participants the following class; see HANDOUT #11-I (**Ideas for Remembering Medical Terms and Abbreviations**) -- to be viewed by instructor only -- for an example

MATERIALS: none

ACTIVITY: write down personal ideas/suggestions for remembering some of the more difficult terms; explain ideas to others; discuss

HANDOUT #11-I

Ideas for Remembering the Medical Terms and Abbreviations

From Bruce, Linda, & Pat:

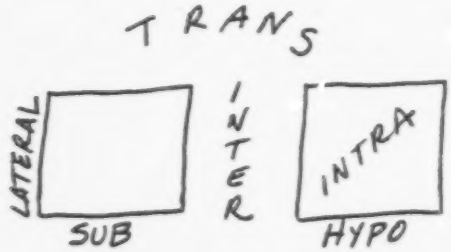
* Look for a familiar word(s) within the term and/or think of another word(s) you know that shares the same meaning of the medical term.

Examples:

AT FIB -- A trial
INTER -- intermission (between)
ELECTROMYOGRAM -- myo (acute myocardial infraction)

From Eric, Liz, Marian, & Rita:

* Draw pictures of terms



* Use words/terms that are already familiar to you as a way of figuring out what individual word parts mean.

Examples:

micro: (little people)
macro: (big people)

micro: micro tubing
macro: macro tubing

HANDOUT #11-I, p. 2

From Robin and Sandra:

* Use the spelling of the meanings of the words to help you remember what the term means.

Examples:

cephal: e -- head
caudal: a -- tail
inter: e -- between
pyleo: y -- kidney
lapar: a -- abdomen

From Eric, Judy, & Liz:

* Word association

* Pictures

Share your own suggestions for remembering these terms

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Lesson 5

TOPIC: Review: Practice Three

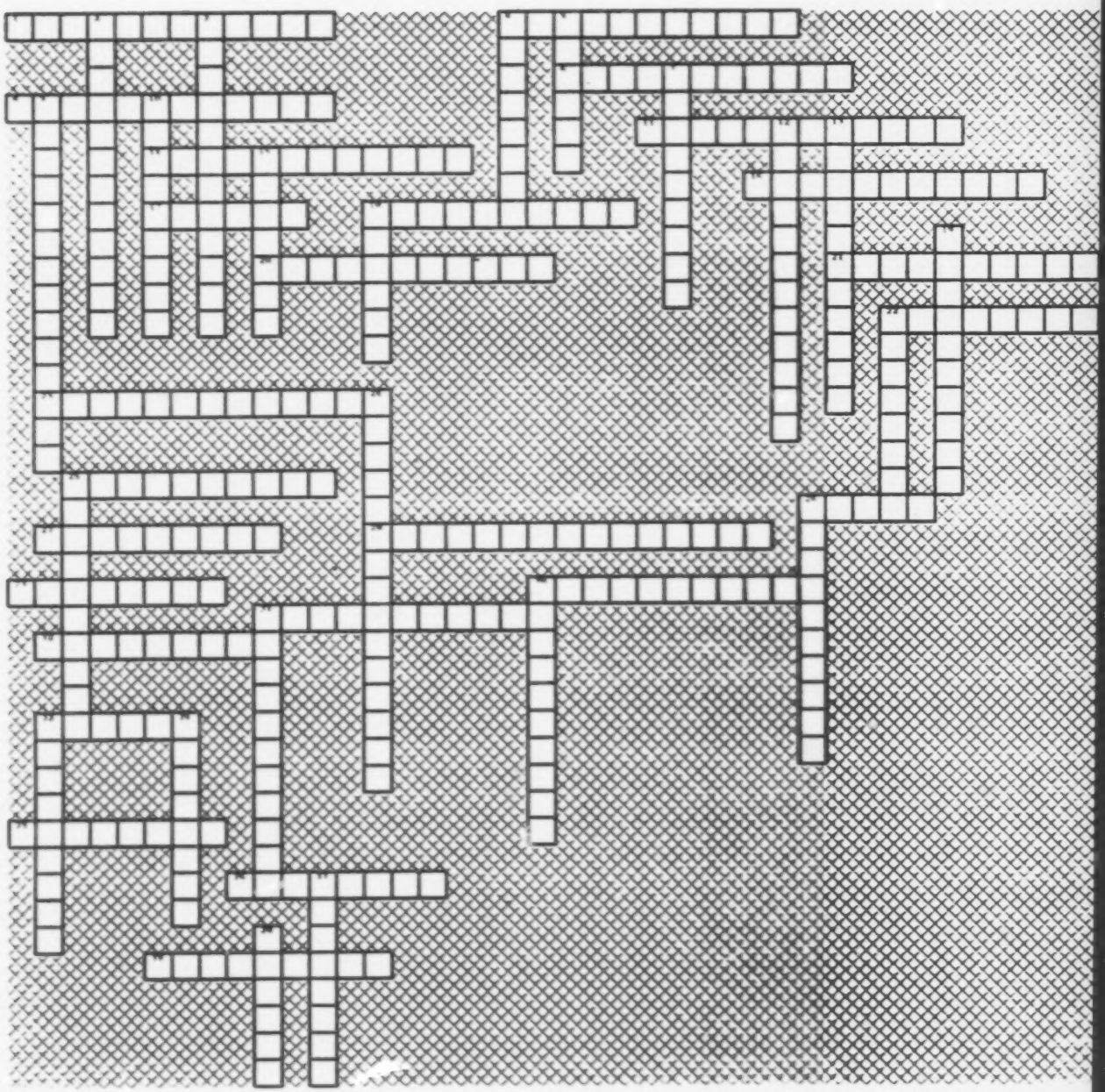
OBJECTIVES: to continue to practice learning medical vocabulary through a creative exercise

INSTRUCTOR INFO: might want to increase size even more for ease of completion

MATERIALS: HANDOUT #12 (**Crossword Puzzle (C)**)

ACTIVITY: participants work together to complete exercise; provide hints for each other; reinforce words by repeating word and then the definition

HANDOUT #12



HANDOUT #12, p. 2

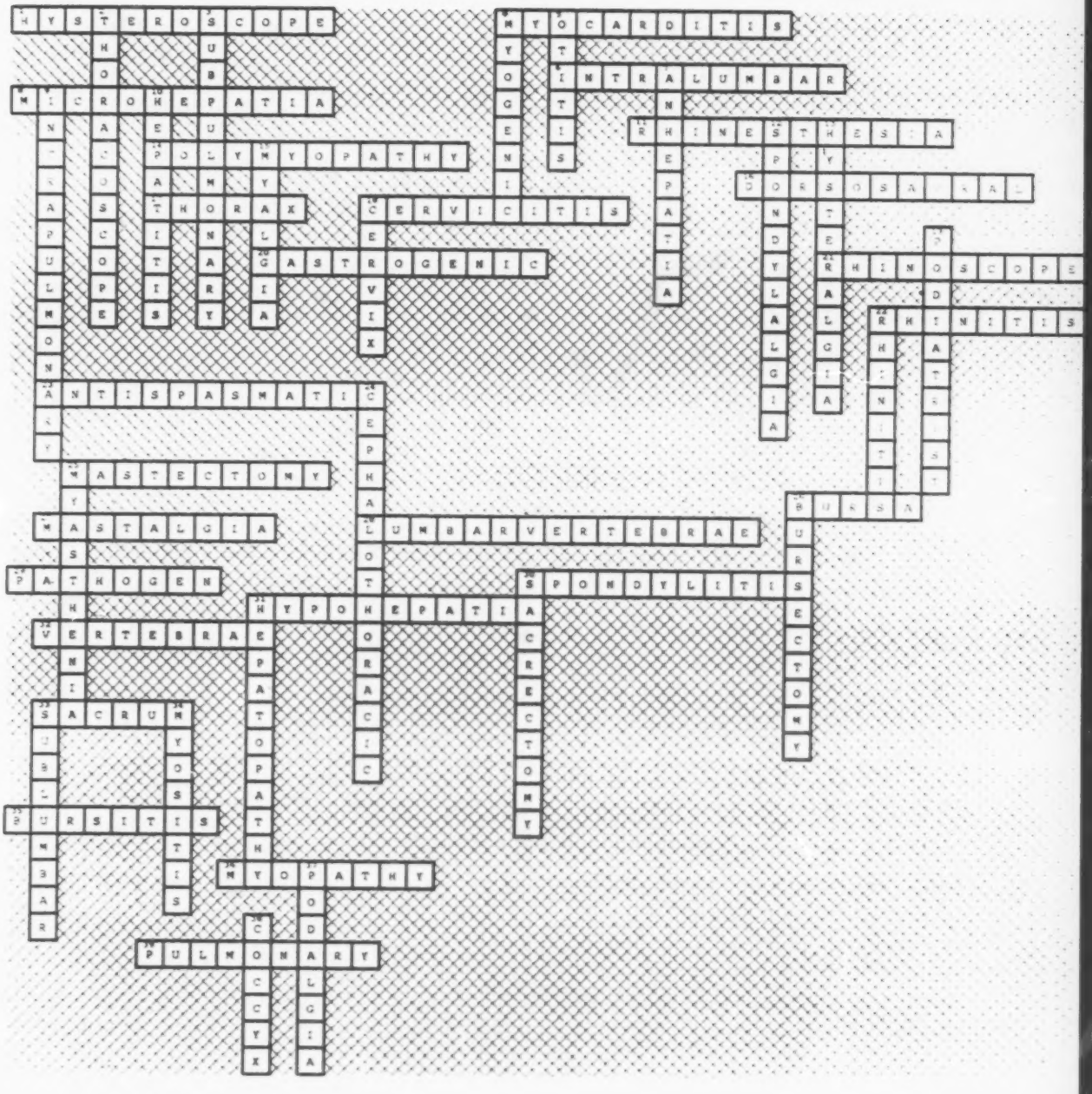
Across

1. instrument used to examine the uterus visually
4. inflammation of the middle layer of the heart wall
6. unusually small liver
11. the sense of smell
14. disease that affects several muscles
16. having to do with the lower back
17. part of the body between the head/neck and the abdomen
18. inflammation of the neck of the uterus
20. originating in the stomach
22. instrument used to visually examine the nose
23. inflammation in the nose
25. surgical removal of the breast
27. sack of fluid, usually found between joints
28. bones of the lower part of the spine (2 wds.)
29. substance capable of producing a disease
30. inflammation of one or more vertebrae
31. decreased functioning of the liver
32. bones that form the backbone
33. vertebrae forming the back of the pelvis
35. inflammation of the bursa
36. any disease of a muscle
39. affecting the lungs

Down

2. instrument used to visually examine the thoracic cavity
3. beneath the lung
4. originating in the muscular tissue
5. inflammation of the ear
7. failure of the liver
9. within the lungs
10. inflammation of the liver
12. pain in the vertebrae
13. pain in the uterus
15. muscle pain
18. neck of the body or neck of the lower portion of the uterus
19. specialist in the treatment of foot disorders
22. inflammation in the nose
24. having to do with the head and the chest
25. great muscle weakness
26. surgical removal of the bursa
30. surgical removal of part of the sacrum
31. any disease of the liver
34. inflammation of a muscle
37. pain in the foot
38. small bone at the lower end of the spinal column (tailbone)

HANDOUT #12-I



HANDOUT #12-I, p. 2

WORD LIST

ANHEPATIA
ANTISPASMATIC
BURSA
BURSECTOMY
BURSITIS
CEPHALOTHORACIC
CERVICITIS
CERVIX
COCCYX
DORSOSACRAL
GASTROGENIC
HEPATITIS
HEPATHOPATHY
HYPOHEPATIA
HYSTERALGIA
HYSTEROSCOPE
INTRALUMBAR
INTRAPULMONARY
LUMBARVERTEBRAE
MASTALGIA
MASTECTOMY
MICROHEPATIA
MYALGIA
MYASTHENIA
MYOCARDITIS
MYOGENIC
MYOPATHY
MYOSITIS
OTITIS
PATHOGEN
PODALGIA
PODIATRIST
POLYMYOPATHY
PULMONARY
RHINESTHESIA
RHINITIS
RHINTIS
RHINOSCOPE
SACRECTOMY
SACRUM
SPONDYLALGIA
SPONDYLITIS
SUBLUMBAR
SUBPULMONARY
THORASCOPE
THORAX
VERTEBRAE

Lesson 6

TOPIC: Review: Practice Four

OBJECTIVES: to practice spelling; continue building word parts into whole words; find commonalties among terms; understand the way medical words are used in context; to match words to their meanings; to associate terms with their abbreviations

INSTRUCTOR INFO: none

MATERIALS: HANDOUT #13
(Vocabulary for Healthcare Review (D))

ACTIVITY: complete the handout, marking those areas that are troublesome; check answers, discuss, and review

HANDOUT #13

Vocabulary for Healthcare Personnel (D)

Multiple Exercises

ORAL SPELLING

Listen to the following medical terms. Spell the term and write its meaning.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

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HANDOUT #13, p. 2

ANTONYMS

Define each of the terms below and provide its opposite.

Word Part	Meaning	Opposite	Meaning
andro			
micro			
brady			
poly			
dors/o			
pre			
hyper			
inferior			

SYNONYMS

Determine what each pair/triplet has in common

antiseptic, antitoxin

cardiosclerosis, arteriosclerosis

postfebrile, postneuritic

sublingual, dentilingual

unilateral, bilateral, trilateral

polyplegia, polyphobia

transport, transfusion

microscope, gastroscope

MEDICAL FAMILIES

Provide the meaning for the related terms.

crani/o: skull

craniomalacia: _____

cranioplasty: _____

craniosclerosis: _____

craniotomy: _____

ot/o: _____

ototomy: _____

otitis: inflammation of

otoplasty: _____

HANDOUT #13, p. 4

cardi/o: _____

cardiopulmonary: having to do with the heart and lungs

cardiologist: _____

cardionephric: _____

derm: _____

_____: below/beneath the skin

dermopathy: _____

neuro: _____

neurogastric: _____

neuropsychopathy: _____

neuroophathalmology: _____

_____: having to do with the nerves and the kidneys

HANDOUT #13, p. 5

MEANING MATCH

Provide the medical term for the underlined word(s) preceding it. Write your answer in the parentheses.

1. Billy had an extreme fear ( ) of doctors.

2. He had sharp, sudden ( ) stomach ( ) pain that cause him to be feverous ( ).

3. Dr. Pete used a measuring device to measure Billy's body heat ( ).

4. The doctor placed the measuring device ( ) under Billy's tongue ( ).

5. Then, Dr. Pete gave Billy a prescription for some medication. Billy and his ma filled the prescription at the drugstore ( ).

6. Thelma, Billy's ma was a bit of a hypochondriac. At first she thought that she was pregnant, but she wasn't. She had a ( ).

7. Next, she complained of muscle pain ( ) in her lower back ( ).

HANDOUT #13, p. 6

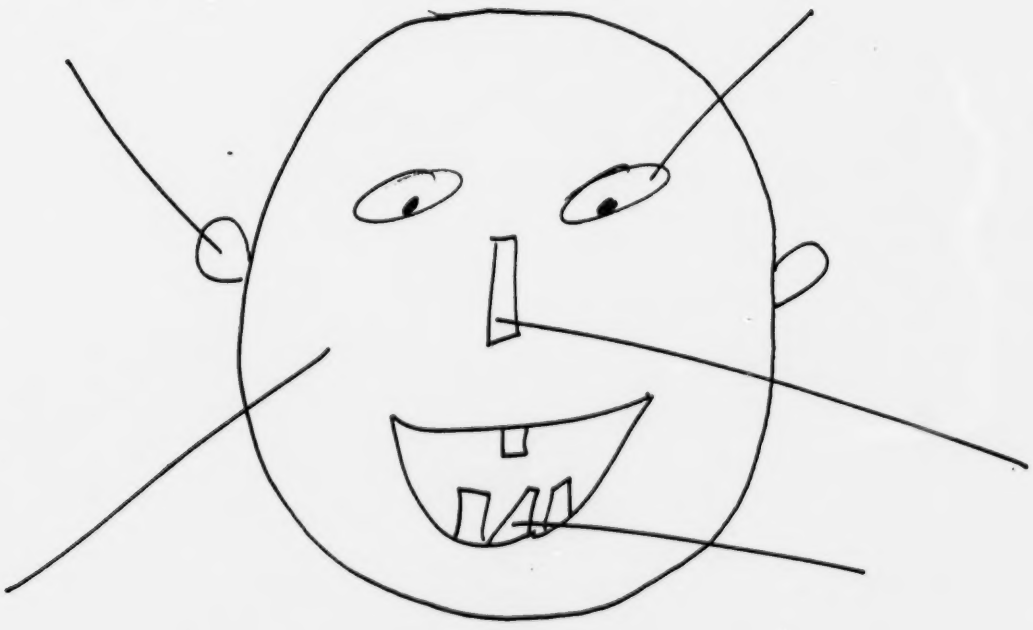
8. Dr. Pete examined her <u>just below the lumbar vertebrae</u> ( ), but Mary had <u>no sensation</u> there ( ).

9. Her pain, she said, was in or near her <u>tailbone</u> ( ).

10. Dr. Pete was unable to find anything wrong, so he prescribed <u>water treatment</u> ( ) for her.

A PICTURE'S WORTH SIX WORDS

Write the root word (medical term) for each of the following body parts:
HEAD, EYES, NOSE, EAR, SKIN, TEETH



MATCHING

Match the term on the left to its meaning on the right.

coronary artery disease	_____	**A.** in the urine system, an acid accumulation in the blood tissue
wound	_____	**B.** opening of the cervical canal followed by scraping of the uterus as a method of diagnosing uterine cancer
transurethral resection prostate/bladder	_____	**C.** swelling of the lung
tibia	_____	**D.** a recording of the strength of muscle as a result of electrical stimulation
laparotomy	_____	**E.** removal of the prostate by means of an instrument that is passed through the ureter
lateral	_____	**F.** acute infectious disease with enlarged lymph nodes
obstetrics	_____	**G.** surgery used to improve the blood supply to the heart when narrowed coronary arteries reduce the flow of blood
infectious mononucleosis	_____	**H.** surgical removal of the appendix
pulmonary edema	_____	**I.** large bone in the lower leg

HANDOUT #13, p. 8

electromyograph	_____	**J.** disease of the arteries surrounding the heart
diabetic ketoacidosis	_____	**K.** an injury
coronary artery bypass	_____	**L.** an incision made between the chest and hip (abdomen)
central nervous system	_____	**M.** of, at, or toward the sides
carpal tunnel syndrome	_____	**N.** the branch and study of medicine that deals with childbirth
dilation and curettage	_____	**O.** an occurrence where a nerve leading to the hand is compressed by connective tissue fibers in the wrist, resulting in burning, pain, and numbness of the hand
appendectomy	_____	**P.** one of the divisions of the nervous system consisting of the brain and spinal cord

HANDOUT #13, p. 9

TABLE (MEDICAL) TERMS

Complete the table

MEANING	TERM	ABBREVIATION
	urinalysis	
a cancerous growth		
		JT
removal of the uterus through the abdominal wall		
	ligament	
the expulsion (either spontaneous or induced) of a fetus from the womb before it is able to survive		
		VS
	unknown	
infectious disease caused by *Mycobacterium tuberculosis*; lungs are usually involved, but any organ in the body may be affected		
heart attack		AMI
abdominal x-ray of the kidney, ureter, and bladder		KUB
		BP
surgical removal of the gallbladder		
		FX
of two sides		
destruction of the myelin sheath on neurons in the CNS and its replacement by plaques of hard tissue		MS
		EEG

HANDOUT #13, p. 10

MEANING	TERM	ABBREVIATION
thickening and hardening of the arteries		
primary statement of one's illness		CC
reoccurring respiratory problem where a lack of protein in the lining of the lung tissue causes collapse of the lungs		ARDS
		C-SECT
a part of a system consisting of the brain and spinal cord		

HANDOUT #13-I

Vocabulary for Healthcare Personnel (D)

Multiple Exercises

ORAL SPELLING

Listen to the following medical terms. Spell the term and write its meaning.

1.	hepatoma	a tumor found in the liver
2.	anesthesia	without feeling
3.	thoracoplasty	surgical reconstruction of the thorax (chest wall)
4.	spondylopathy	disease of the vertebrae
5.	toxicodermatitis	skin inflammation caused by poison
6.	podedema	swelling of the foot
7.	meningioma	tumor in the lining of the brain or spinal cord
8.	macrodontia	abnormally large teeth
9.	ophthalmologist	eye specialist
10.	antiseptic	against disease
11.	mastectomy	surgical removal of the breast
12.	caudal	away from the head; towards the tailbone
13.	vertebrae	backbone/spine
14.	rhinalgia	pain in the nose
15.	psychiatry	area dealing with the study of the mind

HANDOUT #13-I, p. 2

ANTONYMS

Define each of the terms below and provide its opposite.

Word Part	Meaning	Opposite	Meaning
andro	man	gyn	woman
micro	small	macro	large
brady	slow	tachy	fast
poly	many	uni	one
dors/o	back	anterior	front
pre	before	post	after
hyper	too much	hypo	too little
inferior	below	superior	above

SYNONYMS

Determine what each pair/triplet has in common.

antiseptic, antitoxin **preventative against something**

cardiosclerosis, arteriosclerosis **hardening**

postfebrile, postneuritic **the period after**

sublingual, dentrilingual **tongue**

unilateral, bilateral, trilateral **side**

polyplegia, polyphobia	**many**
transport, transfusion	**across**
microscope, gastroscope	**instrument for visually examining**

MEDICAL FAMILIES

Provide the meaning for the related terms.

Crani/o:	skull
craniomalacia:	**softening of**
cranioplasty:	**surgical reconstruction of**
craniosclerosis:	**hardening of**
craniotomy:	**incision into**

ot/o:	**ear**
ototomy:	**tumor**
otitis:	inflammation of the
otoplasty:	**surgical reconstruction of**

HANDOUT #13-I, p. 4

cardi/o: **heart**

cardiopulmonary: having to do with the heart and lungs

cardiologist: **heart specialist**

cardionephric: **having to do with the heart and kidneys**

derm: **skin**

subdermal: below/beneath the skin

dermopathy: **skin disease**

neuro: **nerve**

neurogastric: **having to do with nerve and stomach**

neuropsychopathy: **having to do with disease of the nerves in the mind**

neuroophathalmology: **study of nerves leading to the eye**

neuronephric: having to do with the nerves and the kidneys

HANDOUT #13-I, p. 5

MEANING MATCH

Provide the medical term for the underlined word(s) preceding it. Write your answer in the parentheses.

1. Billy had an extreme fear (**phobia**) of doctors.

2. He had sharp, sudden (**acute**) stomach (**abdominal**) pain that cause him to be feverous (**febrile**).

3. Dr. Pete used a measuring device to measure Billy's body heat (**thermometer**).

4. The doctor placed the measuring device (**thermometer**) under Billy's tongue (**sublingually**).

5. Then, Dr. Pete gave Billy a prescription for some medication. Billy and his ma filled the prescription at the drugstore (**pharmacy**).

6. Thelma, Billy's ma was a bit of a hypochondriac. At first she thought that she was pregnant, but she wasn't. She had a (**pseudo pregnancy**).

7. Next, she complained of muscle pain (**myalgia**) in her lower back (**lumbar vertebrae**).

HANDOUT #13-I, p. 6

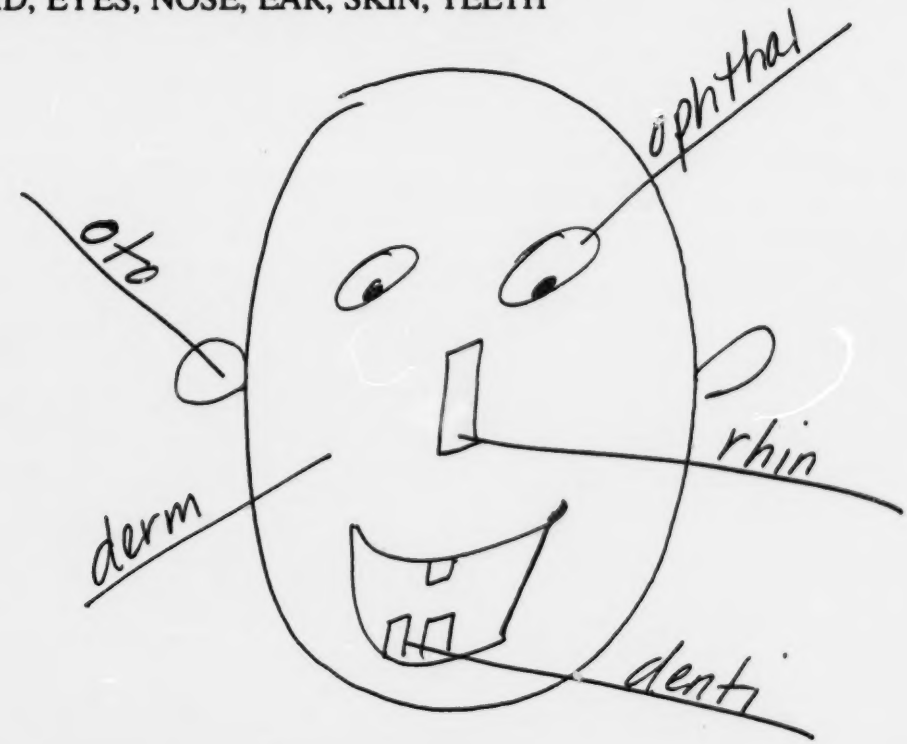
8. Dr. Pete examined her <u>just below the lumbar vertebrae</u> (**sacrum**), but Mary had <u>no sensation</u> there (**anesthesia**).

9. Her pain, she said, was in or near her <u>tailbone</u> (**coccyx**).

10. Dr. Pete was unable to find anything wrong, so he prescribed <u>water treatment</u> (**hydrotherapy**) for her.

A PICTURE'S WORTH SIX WORDS

Write the root word (medical term) for each of the following body parts:
HEAD, EYES, NOSE, EAR, SKIN, TEETH



MATCHING

Match the term on the left to its meaning on the right.

coronary artery disease	J	A. in the urine system, an acid accumulation in the blood tissue
wound	K	B. opening of the cervical canal followed by scraping of the uterus as a method of diagnosing uterine cancer
transurethral resection prostate/bladder	E	C. swelling of the lung
tibia	I	D. a recording of the strength of muscle as a result of electrical stimulation
laparotomy	L	E. removal of the prostate by means of an instrument that is passed through the ureter
lateral	M	F. acute infectious disease with enlarged lymph nodes
obstetrics	N	G. surgery used to improve the blood supply to the heart when narrowed coronary arteries reduce the flow of blood
infectious mononucleosis	F	H. surgical removal of the appendix
pulmonary edema	C	I. large bone in the lower leg

HANDOUT #13-I, p. 8

electromyograph	**D**	**J.** disease of the arteries surrounding the heart
diabetic ketoacidosis	**A**	**K.** an injury
coronary artery bypass	**G**	**L.** an incision made between the chest and hip (abdomen)
central nervous system	**P**	**M.** of, at, or toward the sides
carpal tunnel syndrome	**O**	**N.** the branch and study of medicine that deals with childbirth
dilation and curettage	**B**	**O.** an occurrence where a nerve leading to the hand is compressed by connective tissue fibers in the wrist, resulting in burning, pain, and numbness of the hand
appendectomy	**H**	**P.** one of the divisions of the nervous system consisting of the brain and spinal cord

HANDOUT #13-I, p. 9

TABLE (MEDICAL) TERMS

Complete the table

MEANING	TERM	ABBREVIATION
examination of urine	urinalysis	UA
a cancerous growth	carcinoma	CA
a structure in the body by which bones are fitted together	joint	JT
removal of the uterus through the abdominal wall	total abdominal hysterectomy	TAH
the tough, flexible tissues that holds bones together	ligament	LIG
the expulsion (either spontaneous or induced) of a fetus from the womb before it is able to survive	abortion	AB
the measurable signs of bodily function, e.g., blood, pulse, etc.	vital signs	VS
not identified	unknown	UNK
infectious disease caused by *Mycobacterium tuberculosis*; lungs are usually involved, but any organ in the body may be affected	tuberculosis	TB
heart attack	acute myocardial infarction	AMI
abdominal x-ray of the kidney, ureter, and bladder	kidney, ureter, bladder	KUB
the pressure of blood within the arteries and veins	blood pressure	BP
surgical removal of the gallbladder	cholecystectomy	CHOLE
breaking or breakage, especially of a bone	fracture	FX
of two sides	bilateral	BIL
destruction of the myelin sheath on neurons in the CNS and its replacement by plaques of hard tissue	multiple sclerosis	MS
a record of the electrical activity of the brain	electroenceph-alogram	EEG

HANDOUT #13-I, p. 10

MEANING	TERM	ABBREVIATION
thickening and hardening of the arteries	arteriosclerotic vessel disease	ASVD
primary statement of one's illness	chief complaint	CC
reoccurring respiratory problem where a lack of protein in the lining of the lung tissue causes collapse of the lungs	acute respiratory distress syndrome	ARDS
removal of the fetus by abdominal incision into the uterus	cesarean section	C-SECT
a part of a system consisting of the brain and spinal cord	central nervous system	CNS

Lesson 7

TOPIC: Review: Practice Five

OBJECTIVES: to reiterate meaningful review of medical words through matching, taking apart words, prefixes and suffixes review, spelling, defining, fill in the blank

INSTRUCTOR INFO: answer any questions participants may have as they familiarize themselves with review format

MATERIALS: HANDOUT #14
(Vocabulary for Healthcare Review (E))

ACTIVITY: complete the handout, marking those areas that are troublesome; check answers, discuss, and review

HANDOUT #14

Vocabulary for Healthcare Personnel (E)

Multiple Exercises

MATCHING

Match the term on the left with its meaning on the right. All meanings will not be used.

nephrologist	_____	**A.** a record of the electrical activity of the heart muscle
andropathy	_____	**B.** abnormal fear of drugs
dentilingual	_____	**C.** surgical removal of a joint
gynecopathy	_____	**D.** feeble
oncology	_____	**E.** fever
ophthalmoneuritis	_____	**F.** having to do with the teeth and tongue
febrile	_____	**G.** inflammation of the optic nerve (nerve to the eye)
arthrectomy	_____	**H.** expert in the study of the liver
pharmacophobia	_____	**I.** physician specializing in the kidney
cardiogram	_____	**J.** any disease that only men have
		K. study of tumors or cancer
		L. disease peculiar to the female reproductive system
		M. having to do with the nervous control of the heart

HANDOUT #14, p. 2

MEDICAL "EQUATIONS"

First, break down each of the following words into its parts. Then, define each part and put together. The first one is done for you.

Example: tonsillectomy = tonsils + surgical removal
= surgical removal of the tonsils

INTRAMUSCULAR =

AUDIOLOGIST =

POSTNEURITIC =

SUBABDOMINAL =

ANTIBACTERIAL =

DISEASE =

INTRAVENOUS =

INTERVERTEBRAL DISKS =

HEMATOLOGY =

ELECTROCARDIOGRAPH =

BONUS QUESTION What's the best way to take apart a medical term to find out its meaning?

HANDOUT #14, p. 3

PREFIXES AND SUFFIXES

Provide the meaning for the following prefixes and suffixes. (Think of other words you know that contain these prefixes and suffixes to help you.)

audio	anti
bi	dactyl
dis	ect
gram	hemi
hydro	hyper
hypo	iatric/ia
inter	intra
ist	itis
lateral	lingu/o
macro	micro
multi	ology
para	plegia
poly	post
pre	pseudo
psych	sem
sub	therapy
therm	trans
tri	uni

HANDOUT #14, p. 4

COMBINING PREFIXES AND SUFFIXES

Write medical terms using some of the above prefixes and/or suffixes. (You can use just the word parts here, or you can combine a prefix/suffix with another word you know -- EX: **trans**fusion)

SPELLING

Underline the correctly spelled word.

SONAGRAM	SONOGRAM
APPENDECTOMY	APENDECTOMY
OPTHAMOLOGY	OPHTHALMOLOGY
VERTEBRA	VERTABRA
INFLAMMATION	INFLAMATION
QUADRIPLEGIA	QUADRIPALEGIA
POLYNUERITIS	POLYNEURITIS
MACRODACTYLIA	MACRODACTILLIA
PSUEDOPREGNACY	PSEUDOPREGNANCY
DERMATHERAPY	DERMATOTHERAPY

DEFINITIONS

Define each of the terms above.

ABBREVIATIONS USING WORD BEGINNINGS

Write the word associated with the following abbreviations.

AB	ABD
ABNOR	AMB
BIL	CA
CHR	C SECT
DEGEN	DIS
FIB	HEMI
HYST	

HANDOUT #14, p. 6

FILL IN THE BLANK/DEFINITIONS

Provide the missing word for the following terms, then define.

acute _____ infarction (AMI)

_____ respiratory distress syndrome (ARDS)

arteriosclerotic _____ disease (ASHD)

arteriosclerotic _____ disease (ASVD)

_____ nerve root irritation (CNRI)

chronic obstructive _____ disease (COPD)

cerebral spinal _____ (CSF)

_____ tunnel syndrome (CTS)

ear _____ throat (ENT)

electroencephalogram (EEG)

electrocardiogram (EKG)

electromyogram (EMG)

HANDOUT #14, p.7

WHEEL OF FORTUNE

Fill in the blanks for the following terms, then write the abbreviations next to the term. (The number following the word refers to the number of words in the terms)

_ _ _ U _ _ E D _ M M _ _ _ D _ F _ _ _ _ _ C _
_ Y _ _ R _ _ E (4)

F _ _ _ T _ _ E (1)

_ L _ _ _ D _ _ A _ I N _ _ R Y (3)

_ B _ _ D _ U _ _ R (2)

H _ _ T _ _ Y & _ H _ _ _ _ A L (2)

G _ _ S _ _ T W _ U _ _ (2)

C _ L _ _ R _ & _ E _ S _ _ _ V _ _ Y (2)

_ Y S F _ _ _ _ I _ _ _ _ _ U _ E _ _ N E
B L _ _ _ I _ _ (3)

_ _ V _ R _ U _ K N _ _ _ O _ _ _ _ N (3)

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HANDOUT #14, p.8

MEANING MATCH

Match meaning and term. Choose from the words below. (All terms will not be used.)

_____ a small, lower leg bone

_____ an uncoordinated series of contractions of a heart cavity causing irregular heartbeats

_____ removal of the gallbladder

_____ widening of the opening of the cervix and scraping the inner lining of the uterus

_____ A cancerous tumor

dilation & curettage

cholecystectomy

atrial fibrillation

myocardial infarction

tibia

fibula

carcinoma

hysterectomy

HANDOUT #14-I

Vocabulary for Healthcare Personnel (E)

Multiple Exercises

MATCHING

Match the term on the left with its meaning on the right. All meanings will not be used.

nephrologist	I	A. a record of the electrical activity of the hear muscle
andropathy	J	B. abnormal fear of drugs
dentilingual	F	C. surgical removal of a joint
gynecopathy	L	D. feeble
oncology	K	E. fever
ophthalmoneuritis	G	F. having to do with the teeth and tongue
febrile	E	G. inflammation of the optic nerve (nerve to the eye)
arthrectomy	N	H. expert in the study of the liver
pharmacophobia	B	I. physician specializing in the kidney
cardiogram	A	J. any disease that only men have
		K. study of tumors or cancer
		L. disease peculiar to the female reproductive system
		M. having to do with the nervous control of the heart

HANDOUT #14-I, p. 2

MEDICAL "EQUATIONS"

First, break down each of the following words into its parts. Then, define each part and put together. The first one is done for you.

Example: tonsillectomy	**= tonsils + surgical removal = surgical removal of the tonsils**
INTRAMUSCULAR	**= within + the muscles = within the muscles**
AUDIOLOGIST	**= hearing + expert = hearing expert**
POSTNEURITIC	**= after + neuritis = a period of time after neuritis**
SUBABDOMINAL	**= below + the belly = below the stomach/belly**
ANTIBACTERIAL	**= prevent + against = something that prevents bacteria**
DISEASE	**= not + comfort = not at ease**
INTRAVENOUS	**= within + veins = with veins**
INTERVERTEBRAL DISKS	**= between + bones of the spine = the disks between the bones of the spine**
HEMATOLOGY	**= blood + study of = study of blood**
ELECTROCARDIOGRAPH	**= electric + heart + instrument = instrument for recording electrical impulse of the heart**

BONUS QUESTION What's the best way to take apart a medical term to find out its meaning? **Start from the back of the word, then read it left to right.**

HANDOUT #14-I, p. 3

PREFIXES AND SUFFIXES

Provide the meaning for the following prefixes and suffixes. (Think of other non-medical words you know that contain these prefixes and suffixes to help you.)

audio	**hear**	anti	**against**
bi	**two**	dactyl	**fingers/toes**
dis	**against**	ect	**to surgically remove**
gram	**record**	hemi	**half**
hydro	**water**	hyper	**too much**
hypo	**too little**	iatric/ian	**specialist**
inter	**between**	intra	**within**
ist	**specialist**	itis	**inflammation of**
lateral	**side**	lingu/o	**tongue**
macro	**large**	micro	**small**
multi	**many**	ology	**study of**
para	**birth**	plegia	**paralysis**
poly	**many**	post	**after**
pre	**before**	pseudo	**false**
psych	**mind**	semi	**half**
sub	**below**	therapy	**treatment**
therm	**heat**	trans	**across**
tri	**three**	uni	**one**

HANDOUT #14-I, p. 4

COMBINING PREFIXES AND SUFFIXES

Write five medical terms using some of the above prefixes and/or suffixes. (You can use just the word parts here, or you can combine a prefix/suffix with another word you know -- EX: **trans**fusion) (answers will vary)

SPELLING

Underline the correctly spelled word.

SONAGRAM	**SONOGRAM**	**record sound waves to look inside the body**
APPENDECTOMY	APENDECTOMY	**remove appendix**
OPTHAMOLOGY	**OPHTHALMOLOGY**	**study of eyes**
VERTEBRA	VERTABRA	**backbone**
INFLAMMATION	INFLAMATION	**diseased part of body**
QUADRIPLEGIA	QUADRIPALEGIA	**paralysis of arms & legs**
POLYNUERITIS	**POLYNEURITIS**	**inflammation of many of the nerves**
MACRODACTYLIA	MACRODACTILLIA	**abnormally large fingers/toes**
PSUEDOPREGNACY	**PSEUDOPREGNANCY**	**false pregnancy**
DERMATHERAPY	**DERMATOTHERAPY**	**skin treatment**

HANDOUT #14-I, p. 5

DEFINITIONS

Define each of the terms above.

ABBREVIATIONS USING WORD BEGINNINGS

Write the word associated with the following abbreviations.

AB	**abortion**	ABD	**abdominal**
ABNOR	**abnormal**	AMB	**ambulatory**
BIL	**bilateral**	CA	**carcinoma**
CHR	**chronic**	C SECT	**cesarean section**
DEGEN	**degenerative**	DIS	**dislocation**
FIB	**fibula**	HEMI	**hemiplegia**
HYST	**hysterectomy**		

HANDOUT #14-I, p. 6

FILL IN THE BLANK/DEFINITIONS

Provide the missing word for the following terms, then define.

acute **myocardial** infarction (AMI)

acute respiratory distress syndrome (ARDS)

arteriosclerotic **heart** disease (ASHD)

arteriosclerotic **vessel** disease (ASVD)

cervical nerve root irritation (CNRI)

chronic obstructive **pulmonary** disease (COPD)

cerebral spinal **fluid** (CSF)

carpal tunnel syndrome (CTS)

ear **nose** throat (ENT)

electroencephalogram (EEG)

electrocardiogram (EKG)

electromyogram (EMG)

HANDOUT #14-I, p.7

WHEEL OF FORTUNE

Fill in the blanks for the following terms, then write the abbreviations next to the term. (The number following the word refers to the number of words in the terms)

ACQUIRED IMMUNE DEFICIENCY SYNDROME (4)

FRACTURE (1)

CLOSED HEAD INJURY (3)

BLOOD SUGAR (2)

HISTORY & PHYSICAL (2)

GUNSHOT WOUND (2)

CULTURE & SENSITIVITY (2)

DYSFUNCTIONAL UTERINE BLEEDING (3)

FEVERY UNKNOWN ORIGIN (3)

HANDOUT #14-I, p.8

MEETING MATCH

Match meaning and term. Choose from the words below. (All terms will not be used.)

fibula	a small, lower leg bone
atrial fibrillation	an uncoordinated series of contractions of a heart cavity causing irregular heartbeats
cholecystectomy	removal of the gallbladder
D & C	widening of the opening of the cervix and scraping the inner lining of the uterus
carcinoma	a cancerous tumor

dilation & curettage	tibia
cholecystectomy	fibula
atrial fibrillation	carcinoma
myocardial infarction	hysterectomy

Lesson 8

TOPIC: Post-test

OBJECTIVES: to learn -- both from the employee's perspecive and from the instructor's -- how much healthcare vocabulary employees have learned

INSTRUCTOR INFO: it is recommended that the test be taken individually

MATERIALS: HANDOUT #15 (**Post-test**)

ACTIVITY: employees complete post-test; discuss and check answers afterward; compare pre-test answers to post-test answers, determine common troublesome areas, review

HANDOUT #2

POST-TEST

HANDOUT #2, p. 2

Match the words on the left to its meaning on the right. Not all meanings will be used.

lingu/o	_____	**A.** tooth
hepat/o	_____	**B.** joint
cephal/o	_____	**C.** skull
cost/o	_____	**D.** kidney
denti/i	_____	**E.** tongue
sclerosis	_____	**F.** feeling/sensation
arthr/o	_____	**G.** the head
crani/o	_____	**H.** the rib
		I. liver
		J. hardening

HANDOUT #2, p. 3

Use the word parts in the box to match the meanings. Not all word parts will be used.

oma	tachy	pulmon/o	febr/o
psyche	cost/o	encephal/o	spondyl/o
plasty	toxic	myel/o	myl/o
dactyl/o	brady	plasty	hydr/o/a

_____ poison

_____ tumor

_____ the mind

_____ fast

_____ surgical reconstruction

_____ lung

_____ slow

_____ finger or toe

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HANDOUT #2, p. 4

Write the word part in the blank that corresponds to each definition.

_____	new
_____	within
_____	bone
_____	inflammation
_____	below, too little
_____	many
_____	muscle
_____	false
_____	against
_____	without

HANDOUT #2, p. 5

Separate each word below into its parts and then write the meaning.

intracranial _____

_____

thermalgesia _____

_____

meningitis _____

_____

electrocardiogram _____

_____

rhinometer _____

_____

hypoesthesia _____

_____

mastectomy _____

_____

HANDOUT #2, p. 6

Use the two word parts to make a word that means:

an expert of the heart

_____ + _____ = _____

surgical removal of the uterus

_____ + _____ = _____

abnormally large fingers or toes

_____ + _____ = _____

an inflammation of the kidney

_____ + _____ = _____

paralysis of all four extremities

_____ + _____ = _____

water treatment

_____ + _____ = _____

HANDOUT #2, p. 7

Answer the following questions:

After her daily workout, Felicia took **antispasmatic** medicine for her legs. What was this for?

_____

_____

The man had **edema**. What does that mean?

_____

_____

Dr. Kay gave the patient **anesthesia** before surgery. What will that do?

_____

_____

The test showed that Sam had **hyper**thyroidism. Did his thyroid produce too much or too little?

_____

_____

HANDOUT #2, p. 8

Here are some word parts that show direction or location. Match the word on the left to its mate on the right. Some meanings might match more than one word part. Not all meanings will be used.

medial	_____	**A.** below
trans	_____	**B.** on the left side of the body
posterior	_____	**C.** beside
dorsal	_____	**D.** in the middle
inferior	_____	**E.** across or over
		F. back of the body

HANDOUT #2-I

POST-TEST

(Answers)

HANDOUT #2-I, p. 2

Match the words on the left to its meaning on the right. Not all meanings will be used.

lingu/o	**E**	A. tooth
hepat/o	**I**	B. joint
cephal/o	**G**	C. skull
cost/o	**H**	D. kidney
denti/i	**A**	E. tongue
sclerosis	**J**	F. feeling/sensation
arthr/o	**B**	G. the head
crani/o	**C**	H. the rib
		I. liver
		J. hardening

HANDOUT #2-I, p. 3

Use the word parts in the box to match the meanings. Not all word parts will be used.

oma	tachy	pulmon/o	febr/o
psyche	cost/o	encephal/o	spondyl/o
plasty	toxic	myel/o	myl/o
dactyl/o	brady	plasty	hydr/o/a

toxic	poison
oma	tumor
psyche	the mind
tachy	fast
plasty	surgical reconstruction
pulmon/o	lung
brady	slow
dactyl/o	finger or toe

HANDOUT #2-I, p. 4

Write the word part in the blank that corresponds to each definition.

neo	new
intra	within
ostelo	bone
itis	inflammation
hypo	below, too little
poly	many
myo	muscle
psuedo	false
anti	against
an	without

HANDOUT #2-I, p. 5

Separate each word below into its parts and then write the meaning.

intracranial	**intra - within / cranial - skull = within the skull**
thermalgesia	**therm - heat / algesia - pain = pain caused by heat**
meningitis	**menin - membranes of brain / spinal cord itis - inflammation of = inflammation of the membranes that surround the brain or spinal cord**
electrocardiogram	**electro - electrical / cardi/o - heart / gram - recording = a recording of the electricity in the heart**
rhinometer	**rhin/o - nose / meter - instrument being used to measure = instrument used to measure the nose**
hypoesthesia	**hypo - too little / estesia - feeling/sensation = decreased sensitivity to pain**
mastectomy	**mast - breast / ect - surgical removal = surgical removal of the breast**

HANDOUT #2-I, p. 6

Use the two word parts to make a word that means:

an expert of the heart

ologist + cardi/o = cardiologist

surgical removal of the uterus

ect/o + hyster/o = hysterectomy

abnormally large fingers or toes

macro + dactyl/o = macrodactylia

an inflammation of the kidney

itis + nephr/o = cardiologist

paralysis of all four extremities

plegia + quad = quadriplegia

water treatment

hydro + therapy = hydrotherapy

HANDOUT #2-I, p. 7

Answer the following questions:

After her daily workout, Felicia took antispasmatic medicine for her legs. What was this for?

to reduce/calm the tightening & contracting of her muscles

The man had edema. What does that mean?

retention of fluid/swelling

Dr. Kay gave the patient anesthesia before surgery. What will that do?

leave the patient without feeling

The test showed that Sam had hyperthyroidism. Did his thyroid produce too much or too little?

too much

HANDOUT #2-I, p. 8

Here are some word parts that show direction or location. Match the word on the left to its mate on the right. Some meanings might match more than one word part. Not all meanings will be used.

medial	**D**	A. below
trans	**E**	B. on the left side of the body
posterior	**F**	C. beside
dorsal	**F**	D. in the middle
inferior	**A**	E. across or over
		F. back of the body

SUGGESTED MEDICAL RESOURCES

Anatomy Flashcards
Edwards, Mayhew, Argetsinger, Mosby Publishing, 1990

Brady's Introduction to Medical Terminology, 3rd ed.
Carol A. Lillis, 1990.

Dorland's Medical Speller, 1992

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The Elements of Medical Terminology .
April Applegate and Valerie Overton, 1994

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Miller-Keane, 1992

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Davi-Ellen Chabner, 1991

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Neil M. Davis, 1993

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Jacqueline Joseph Birmingham, 1990

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